8 FORECAST CHARTS

8.1 Short-Range Surface Prognostic (Prog) Charts

Short-Range Surface Prognostic (Prog) Charts (Figure 8-1) provide a forecast of surface pressure systems, fronts and precipitation for a 2-day period. The forecast area covers the 48-contiguous states, the coastal waters and portions of adjacent countries. The forecasted conditions are divided into four forecast periods, 12-, 24-, 36-, and 48-hours. Each chart depicts a "snapshot" of weather elements expected at the specified valid time.

The Surface Prognostic (Prog) Charts are available at the Aviation Digital Data Services (ADDS) web site at: http://adds.aviationweather.noaa.gov/progs/.

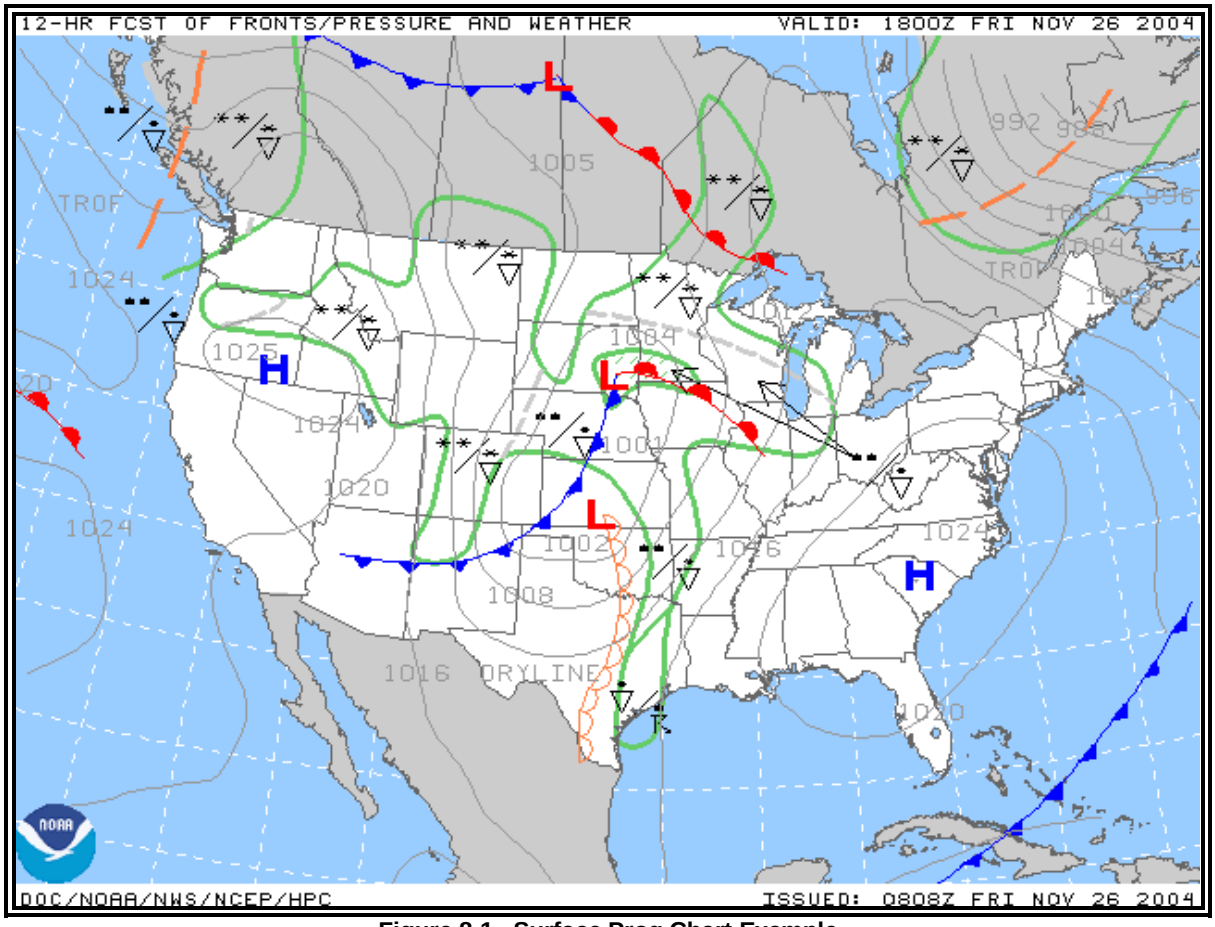


Figure 8-1. Surface Prog Chart Example

8.1.1 Content

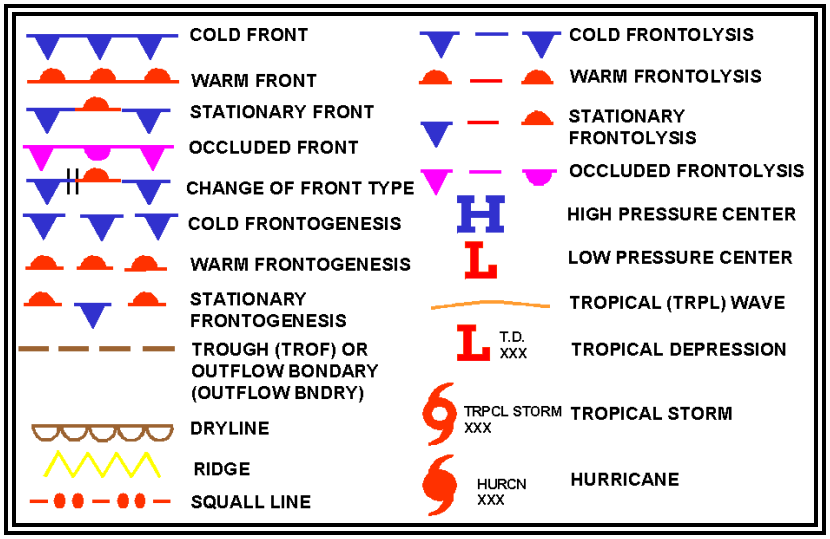


Figure 8-2. Surface Prog Chart Symbols

8.1.1.1 Pressure Systems

Pressure systems are depicted by pressure centers, troughs, isobars, drylines, tropical waves, tropical storms and hurricanes using standard symbols (Figure 8-2). Isobars are denoted by solid thin gray lines and labeled with the appropriate pressure in millibars. The central pressure is plotted near the respective pressure center.

8.1.1.2 Fronts

Fronts are depicted using the standard symbols in Figure 8-2.

8.1.1.3 Squall Lines

Squall lines are denoted using the standard symbol in Figure 8-2.

8.1.1.4 Precipitation

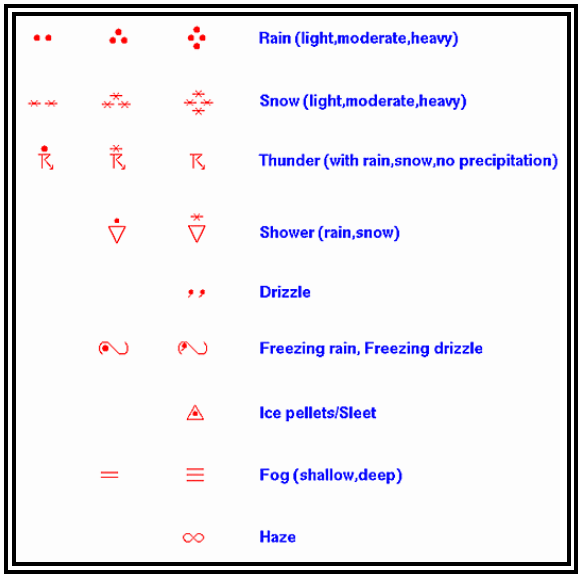


Figure 8-3. Surface Prog Chart Precipitation Symbols

Precipitation areas are enclosed by thick, solid, green lines (Figure 8-4). Standard precipitation symbols are used to identify precipitation types (Figure 8-3). These symbols are positioned within or adjacent to the associated area of precipitation. If adjacent to the area, an arrow will point to the area with which they are associated. A mix of precipitation is indicated by the use of two pertinent symbols separated by a slash (Figure 8-4). A bold, dashed, grey line is used to separate precipitation within an outlined area with contrasting characteristics (Figure 8-4). For instance, a dashed line would be used to separate an area of snow from an area of rain.

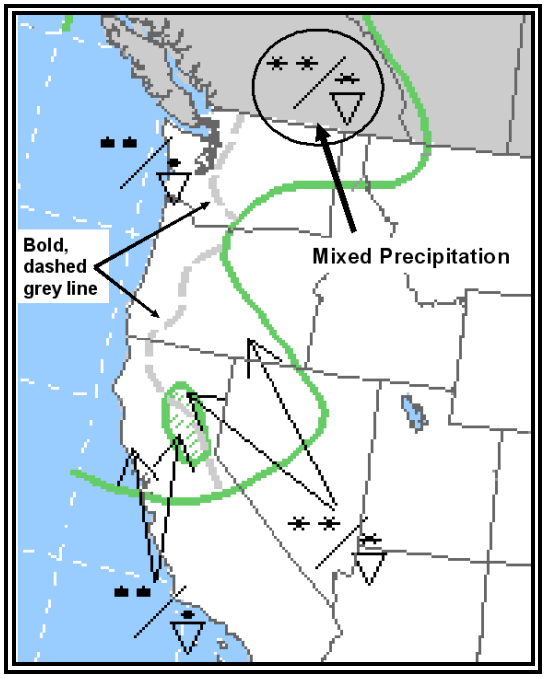


Figure 8-4. Surface Prog Chart Precipitation Example

Precipitation characteristic are further described by the use of shading (Figure 8-5). Shading or lack of shading indicates the expected coverage of the precipitation. Shaded areas indicate the precipitation is expected to have more than 50% (broken) coverage. Unshaded areas indicate 30-50% (scattered) coverage.

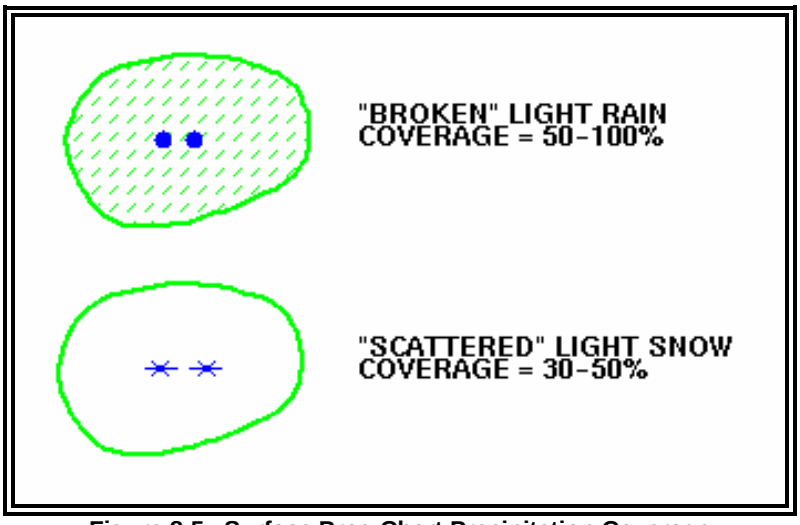


Figure 8-5. Surface Prog Chart Precipitation Coverage

8.1.2 Issuance

Short-Range Surface Prognostic (Prog) Charts are issued by the Hydrometeorological Prediction Center (HPC) in Camp Springs, MD. Table 8-1 provides the product schedule. The 12- and 24-Hour Surface Prognostic (Prog). Charts are issued four times a day and are termed "Day 1" progs. The 36- and 48- Hour Surface Prog Charts are issued twice daily and are termed "Day 2" progs. They are available on the HPC web site at: http://adds.aviationweather.noaa.gov/progs/.

Table 8-1. Short-Range Surface Prog Charts Schedule

	Issuance Time (UTC)			
	~1720	~2310	~0530	~0935
	Valid Time (UTC)			
12-Hour Surface Prog	0000	0600	1200	1800
24-Hour Surface Prog	1200	1800	0000	0600
36-Hour Surface Prog	0000	NA	1200	NA
48-Hour Surface Prog	1200	NA	0000	NA

8.1.3 Use

Short-Range Surface Prognostic (Prog) Charts can be used to obtain an overview of the progression of surface weather features during the next 48 hours. The progression of weather is the change in position, size, and intensity of weather with time. Progression analysis is accomplished by comparing charts of observed conditions to the 12-, 24-, 36-, and 48-hour progs. Short-Range Surface Prognostic (PROG) Charts make the comprehension of weather details easier and more meaningful. For example, in Figures 8-6 through 8-9, the cold front located from the eastern Great Lakes to Missouri is forecast to move southeastward and the High pressure center just north of the Minnesota/North Dakota boarder is also forecast to move southeast and weaken.

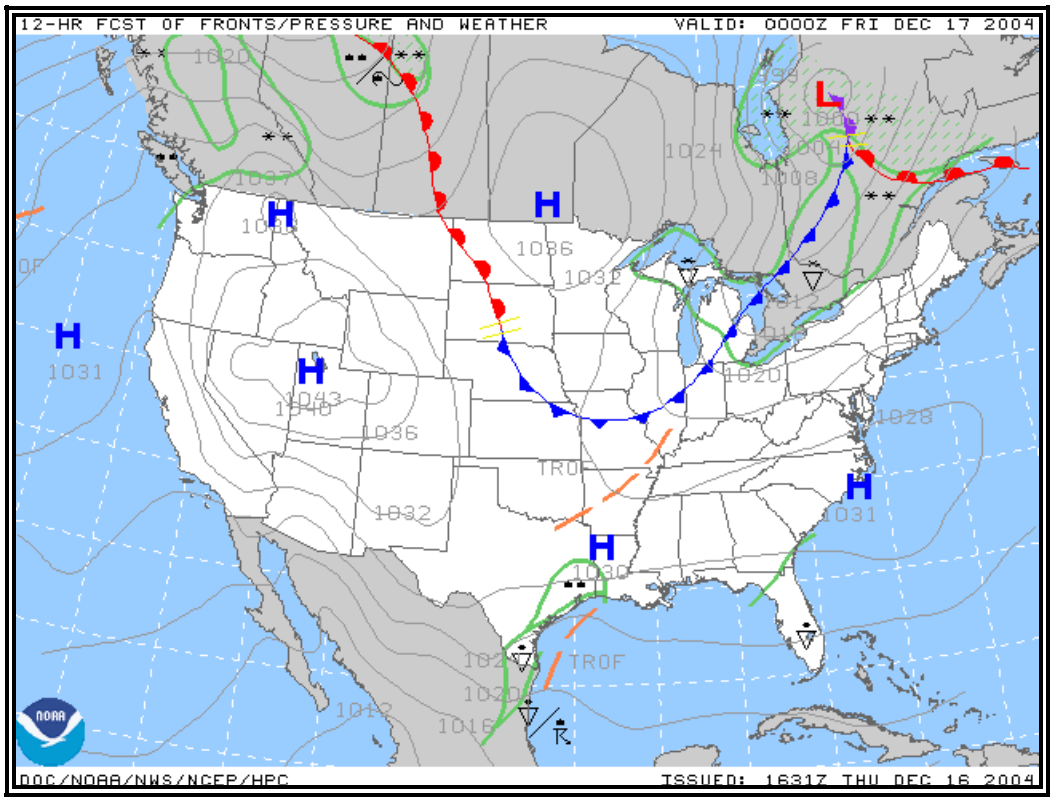


Figure 8-6. 12-hour Surface Prog Chart Example

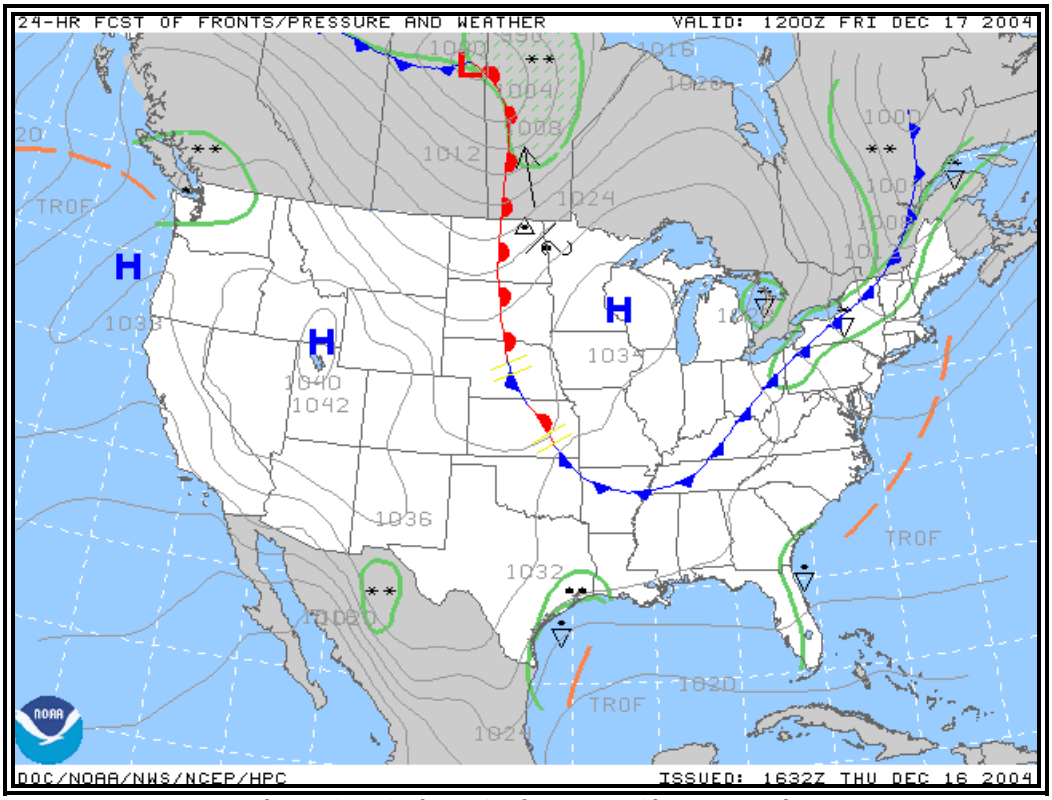


Figure 8-7. 24-hour Surface Prog Chart Example

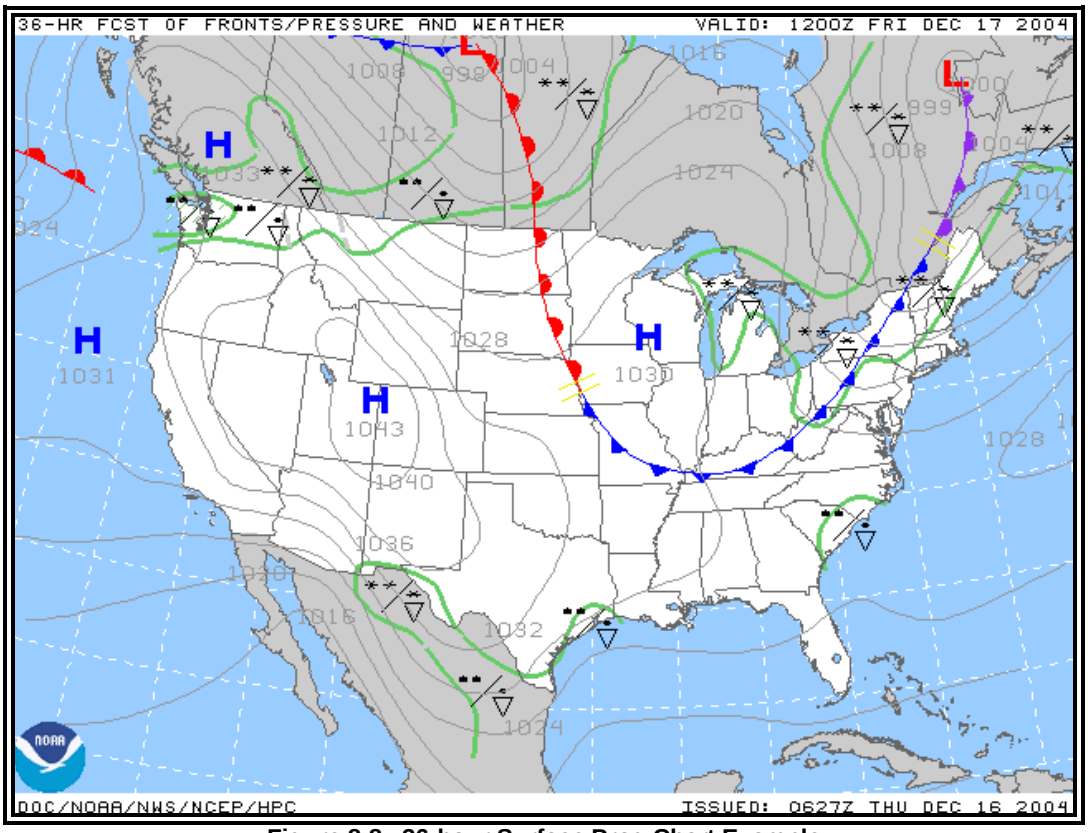


Figure 8-8. 36-hour Surface Prog Chart Example

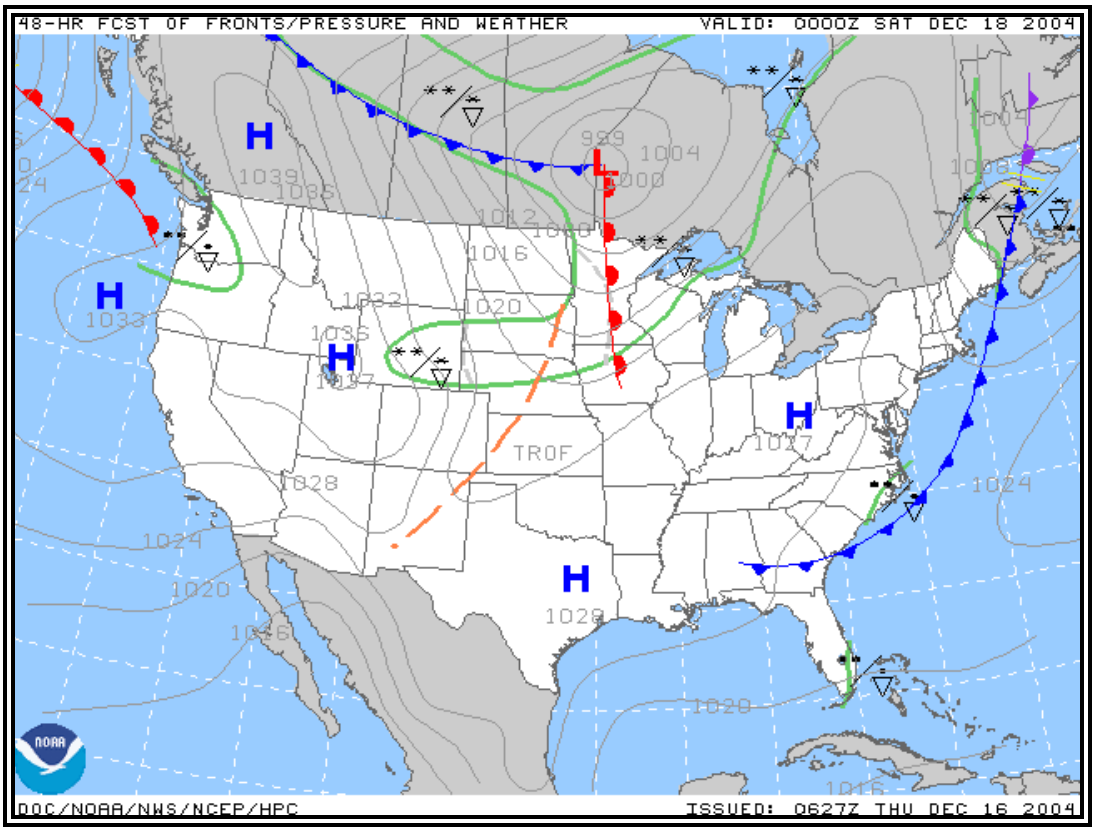


Figure 8-9. 48-hour Surface Prog Chart Example

8.2 Low-Level Significant Weather (SIGWX) Charts

The Low-Level Significant Weather (SIGWX) Charts (Figure 8-10) provide a forecast of aviation weather hazards primarily intended to be used as guidance products for pre-flight briefings. The forecast domain covers the 48 contiguous states and the coastal waters for altitudes 24,000 ft MSL (Flight Level 240 or 400 millibars) and below. Each chart depicts a "snapshot" of weather expected at the specified valid time.

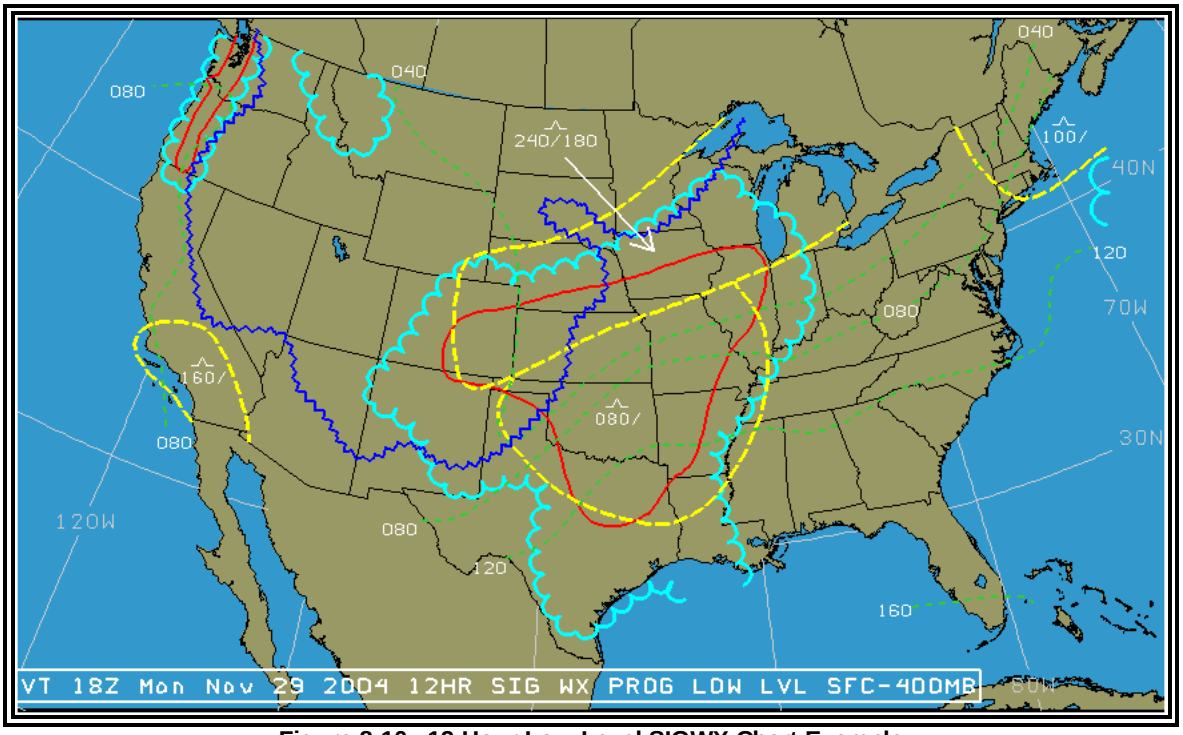


Figure 8-10. 12-Hour Low-Level SIGWX Chart Example

8.2.1 Content

Low-Level Significant Weather (SIGWX) Charts depict weather flying categories, turbulence, and freezing levels (Figure 8-11). Icing is not specifically forecast.

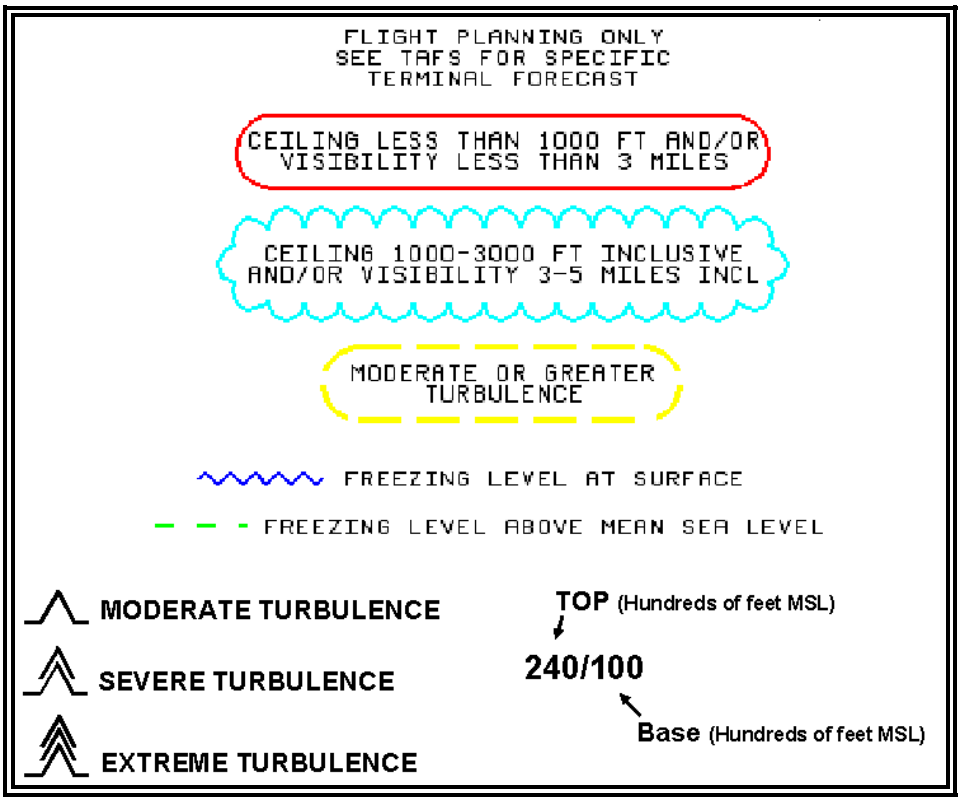


Figure 8-11. Low-Level SIGWX Chart Symbols

8.2.1.1 Flying Categories

Instrument Flight Rules (IFR) areas are outlined with a solid red line, Marginal Visual Flight Rules (MVFR) areas are outlined with a scalloped cyan (light blue) line, Visual Flight Rules (VFR) areas are not depicted (Figure 8-12).

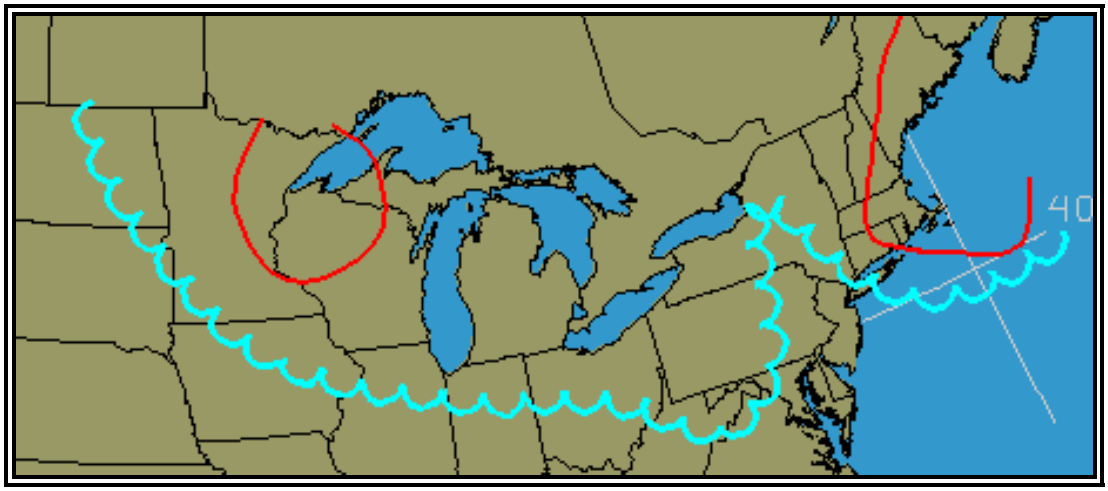


Figure 8-12. Low-Level SIGWX Chart Flying Categories Example

8.2.1.2 Turbulence

Areas of moderate or greater turbulence are enclosed by bold, dashed, yellow lines (Figure 8-13). Turbulence intensities are identified by standard symbols (Figure 8-11). The vertical extent of turbulence layers is specified by top and base heights separated by a slant. The intensity

symbols and height information may be located within or adjacent to the forecasted areas of turbulence. If located adjacent to an area, an arrow will point to the associated area. Turbulence height is depicted by two numbers separated by a solidus **/**. For example, an area on the chart with turbulence indicated as **240/100** indicates the turbulence can be expected from the top at FL240 to the base at 10,000 feet MSL. When the base height is omitted, the turbulence is forecast to reach the surface. For example, **080/** identifies a turbulence layer from the surface to 8,000 feet MSL. Turbulence associated with thunderstorms is not depicted on the chart.

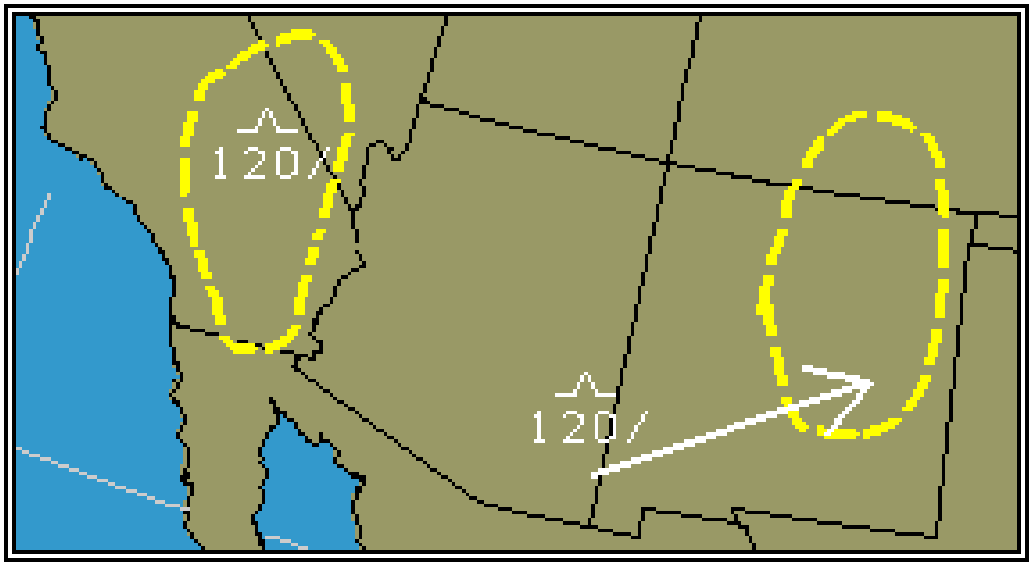


Figure 8-13. Low-Level SIGWX Chart Turbulence Forecast Example

8.2.1.3 Freezing Levels

The freezing level at the surface is depicted by a blue, saw-toothed symbol (Figure 8-11). The surface freezing level separates above-freezing from below-freezing temperatures at the Earth's surface.

Freezing levels above the surface are depicted by fine, green, dashed lines labeled in hundreds of feet MSL beginning at 4,000 feet using 4,000 foot intervals (Figure 8-11). If multiple freezing levels exist, these lines are drawn to the highest freezing level. For example, **80** identifies the 8,000-foot freezing level contour (Figure 8-14). The lines are discontinued where they intersect the surface.

The freezing level for locations between lines is determined by interpolation. For example, the freezing level midway between the 4,000 and 8,000 foot lines is 6,000 feet.

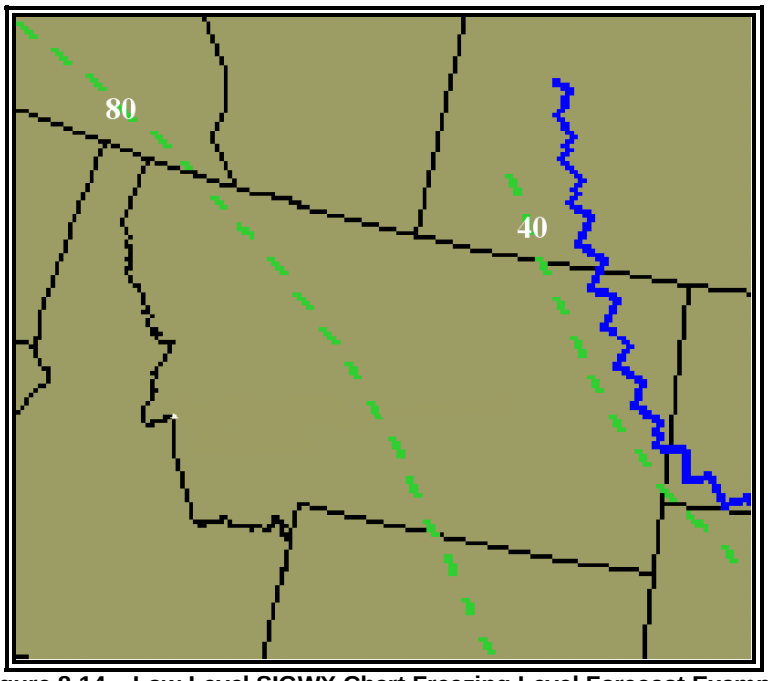


Figure 8-14. Low-Level SIGWX Chart Freezing Level Forecast Example

Multiple freezing levels occur when the temperature is zero degrees Celsius at more than one altitude aloft. Multiple freezing levels can be forecasted on the Low-Level Significant Weather Prog Charts in situations where the temperature is below-freezing (negative) at the surface with multiple freezing levels aloft.

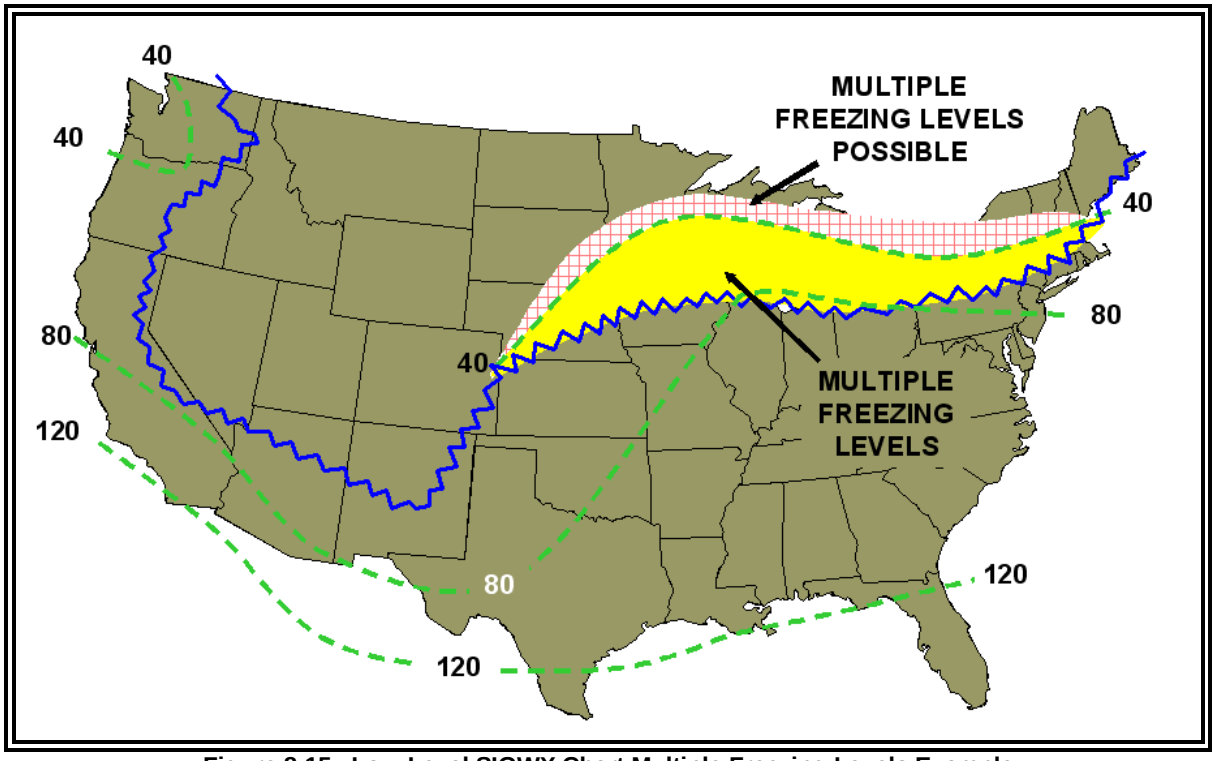


Figure 8-15. Low-Level SIGWX Chart Multiple Freezing Levels Example

On the chart, areas with multiple freezing levels are located on the below-freezing side of the surface freezing level contour and bounded by the 4,000 foot freezing level. Multiple freezing levels are **possible** beyond the 4,000 feet freezing level (i.e., below 4,000 feet MSL), but the exact cutoff cannot be determined (Figure 8-15).

8.2.2 Issuance

Low-Level Significant Weather (SIGWX) Charts are issued four times per day by the Aviation Weather Center (AWC) in Kansas City, Missouri (Table 8-2). Two charts are issued; a 12-hour and a 24-hour prog. Both are available on the AWC web site: http://aviationweather.gov/products/swl/.

Table 8-2. Low-Level SIGWX Chart Issuance Schedule

	Issuance Time			
	~1720Z	~2310Z	~0530Z	~0935Z
Chart	**Valid Time**			
12-Hour Prog	00Z	06Z	12Z	18Z
24-Hour Prog	12Z	18Z	00Z	06Z

8.2.3 Use

The Low-Level Significant Weather (SIGWX) Charts provide an overview of selected aviation weather hazards up to 24,000 feet MSL (FL240 or 400 millibars) at 12- and 24-hours into the future.

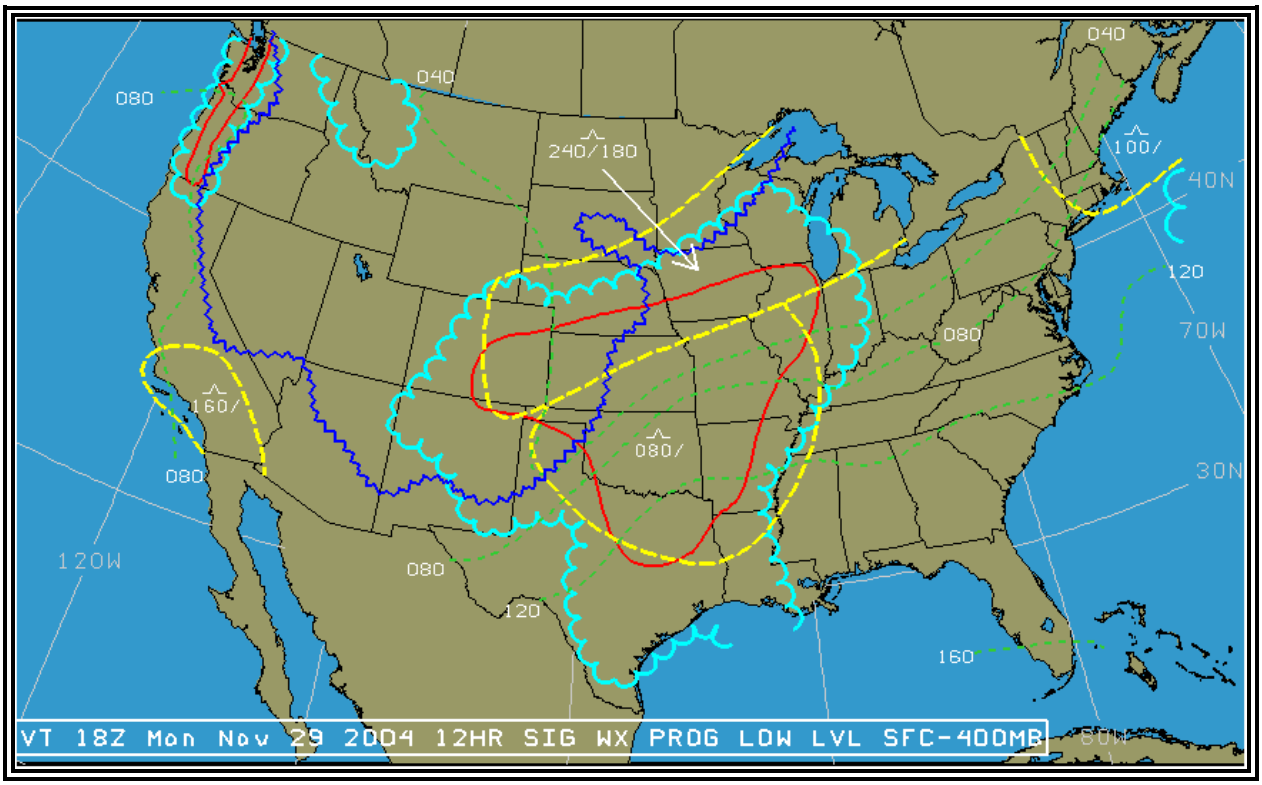


Figure 8-16. 12-Hour Low-Level SIGWX Chart Example

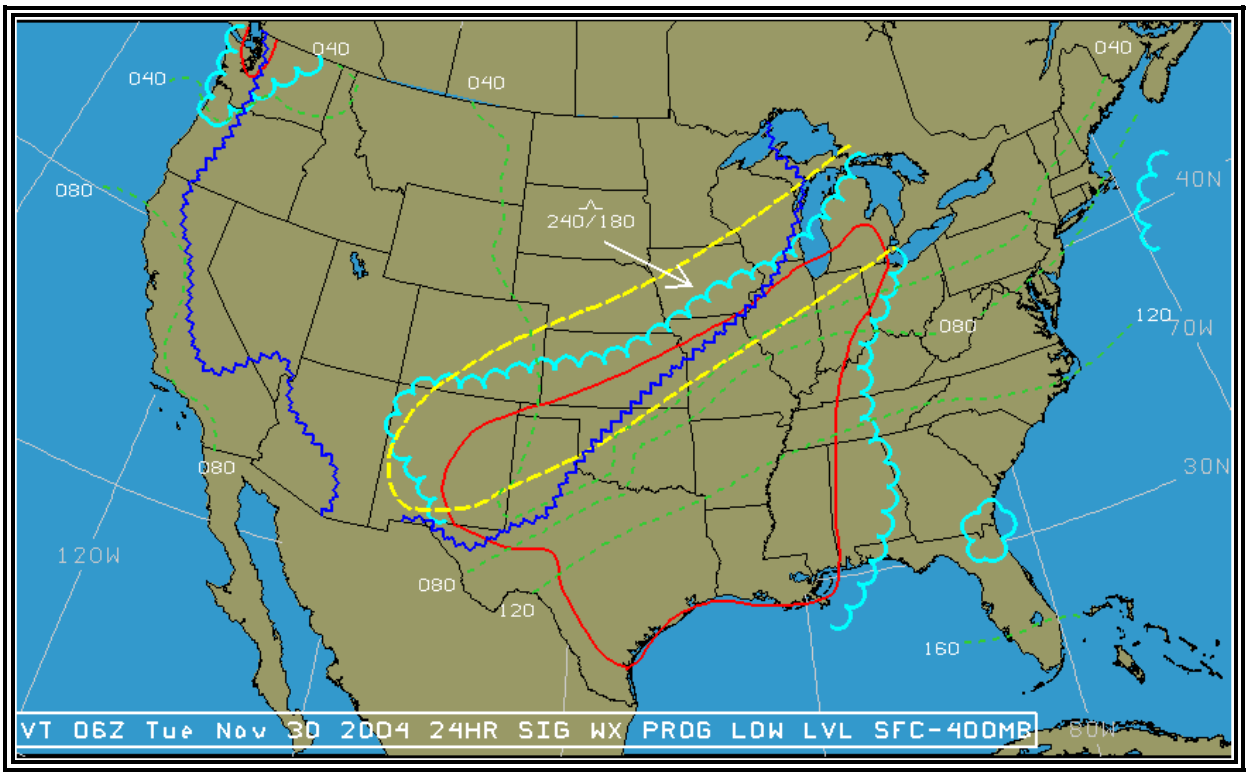


Figure 8-17. 24-hour Low-Level SIGWX Chart Example

8.3 Mid-Level Significant Weather (SIGWX) Chart

The Mid-Level Significant Weather (SIGWX) Chart (Figure 8-18) provides a forecast of significant en route weather phenomena over a range of flight levels from 10,000 ft MSL to FL450, and associated surface weather features. The chart depicts a "snapshot" of weather expected at the specified valid time.

The Mid-Level Significant Weather (SIGWX) Chart is available on the Aviation Weather Center web site at: http://aviationweather.gov/products/swm/.

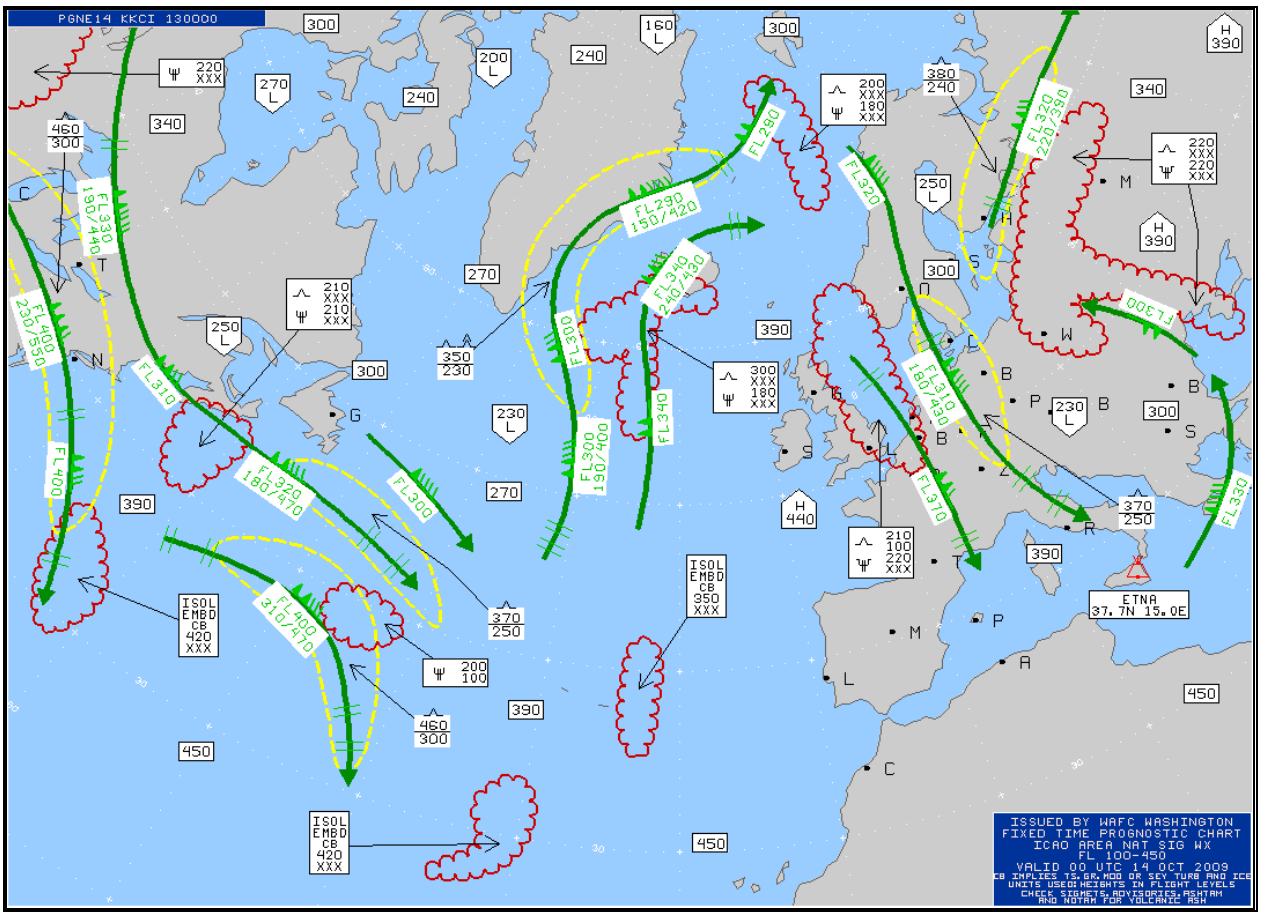


Figure 8-18. Mid-Level SIGWX Chart Example

8.3.1 Content

The Mid-Level Significant Weather (SIGWX) Chart depicts numerous weather elements that can be hazardous to aviation.

8.3.1.1 Thunderstorms

The abbreviation **CB** is only included where it refers to the expected occurrence of an area of widespread cumulonimbus clouds, cumulonimbus along a line with little or no space between individual clouds, cumulonimbus embedded in cloud layers, or cumulonimbus concealed by haze. It does not refer to isolated or scattered cumulonimbus not embedded in cloud layers or concealed by haze.

Each cumulonimbus area is identified with **CB** and characterized by coverage, bases and tops.

Table 8-3. Mid-Level SIGWX Chart Cumulonimbus Coverage

CODED	CHARACTERIZATION	MEANING
ISOL	Isolated	Less than 1/8th coverage
OCNL	Occasional	1/8th to 4/8^{ths} coverage
FRQ	Frequent	More than 4/8^{ths} coverage
EMBD	Embedded	CBs concealed by other cloud layers, haze, dust, etc.

Coverage, Table 8-3, is identified as isolated (**ISOL**) meaning less than 1/8th, occasional (**OCNL**) meaning 1/8th to 4/8^{ths}, and frequent (**FRQ**) meaning more than 4/8^{ths} coverage. Isolated and occasional **CB**s are further characterized as embedded (**EMBD**). The chart does not display isolated or scattered cumulonimbus clouds unless they are embedded in other clouds, haze, or dust.

The vertical extent of cumulonimbus layer is specified by top and base heights. Bases that extend below 10,000 feet (the lowest altitude limit of the chart) are encoded **XXX**.

Cumulonimbus clouds (**CB**s) are depicted by enclosed (red) scalloped lines (Figure 8-19). The identification and characterization of each cumulonimbus area appears within or adjacent to the outlined area. If the identification and characterization is adjacent to an outlined area, an arrow points to the appropriate cumulonimbus area.

On significant weather (SIGWX) charts, the inclusion of **CB** or the thunderstorm symbol (Figure 8-3) should be understood to include all weather phenomena normally associated with cumulonimbus or thunderstorm, namely, moderate or severe icing, moderate or severe turbulence, and hail.

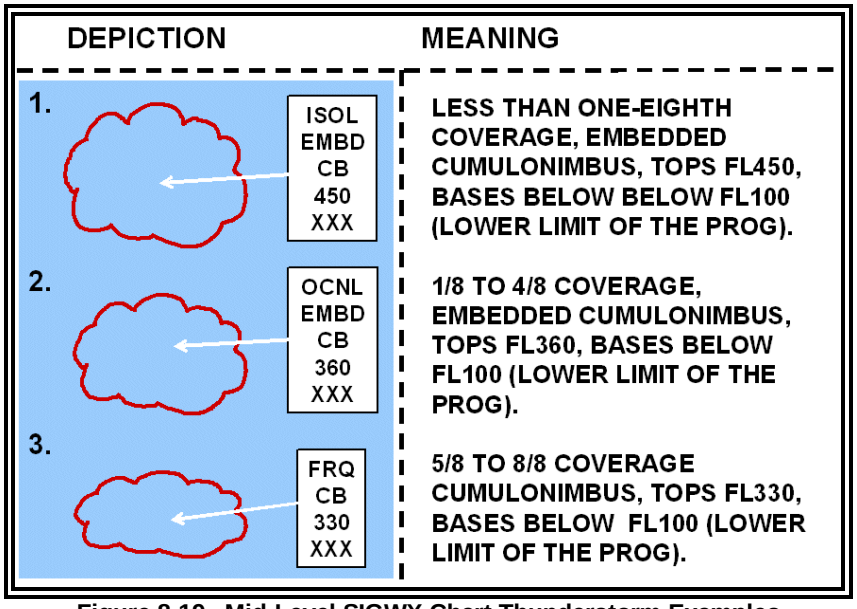


Figure 8-19. Mid-Level SIGWX Chart Thunderstorm Examples

8.3.1.2 Jet Streams

A jet stream axis with a wind speed of more than 80 knots is identified by a bold green line (Figure 8-21). An arrowhead is used to indicate wind direction. Double-hatched, light green lines positioned along a jet stream axis identify 20 knot wind speed changes.

Symbols and altitudes are used to further characterize a jet stream axis. A standard wind symbol (light green) is placed at each pertinent position to identify wind velocity. The flight level "FL" in hundreds of feet MSL is placed adjacent to each wind symbol to identify the altitude of the jet stream axis.

Jet stream vertical depth (jet depth) forecasts are included when the maximum speed is 120 knots or more. Jet depth is defined as the vertical depths to the 80 knot wind field above and below the jet stream axis using flight levels.

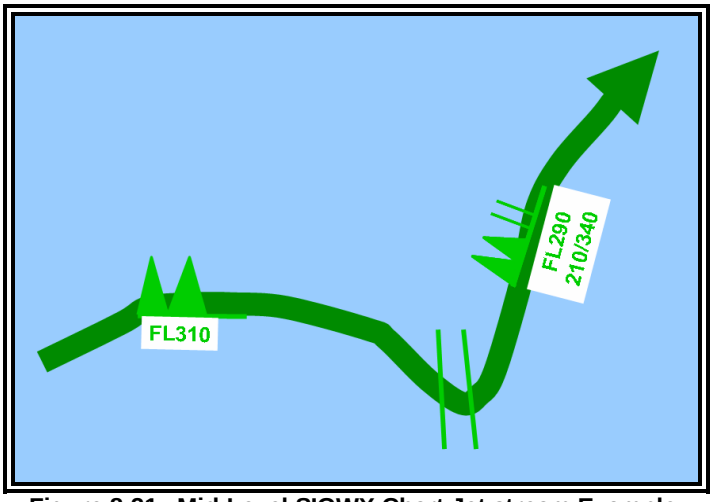


Figure 8-21. Mid-Level SIGWX Chart Jet stream Example.
Forecast maximum speeds of 100 knots at FL310 at one location and 120 knots at FL290 at another location. At the latter location, the base of the 80 knot wind field is FL210, and the top of the 80 knot wind field is FL340.

8.3.1.3 Tropopause Heights

Tropopause heights are plotted at selected locations on the chart (Figure 8-22). They are enclosed by rectangles and plotted in hundreds of feet MSL. Centers of high (**H**) and low (**L**) tropopause heights are enclosed by polygons and plotted in hundreds of feet MSL.

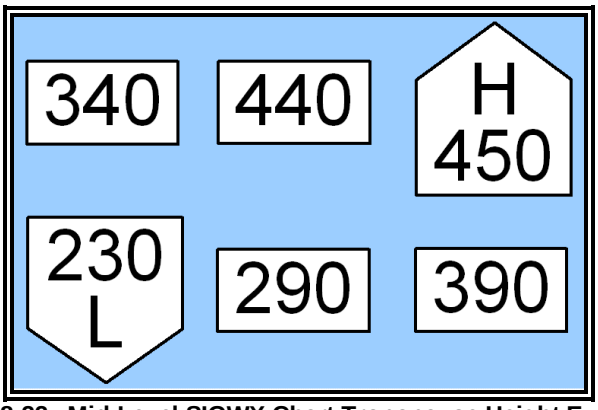


Figure 8-22. Mid-Level SIGWX Chart Tropopause Height Examples

8.3.1.4 Tropical Cyclones

Tropical cyclones are depicted by the appropriate symbol (Figure 8-23) with the storm's name positioned adjacent to the symbol. Cumulonimbus clouds meeting chart criteria are identified and characterized relative to each storm.

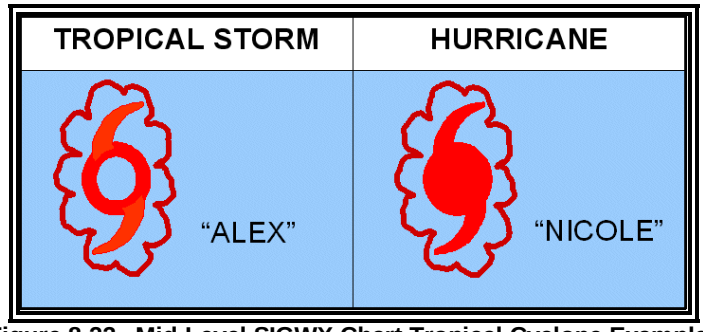


Figure 8-23. Mid-Level SIGWX Chart Tropical Cyclone Examples

8.3.1.5 Moderate or Severe Icing

Areas of moderate or severe icing are depicted by enclosed (red) scalloped lines (Figure 8-24). The identification and characterization of each area appears within or adjacent to the outlined area. If the identification and characterization is adjacent to an outlined area, an arrow points to the appropriate area.

The identification box uses the standard icing symbol (Appendix J). The vertical extent of the icing layer is specified by top and base heights. Bases which extend below the layer of the chart are identified with **XXX**.

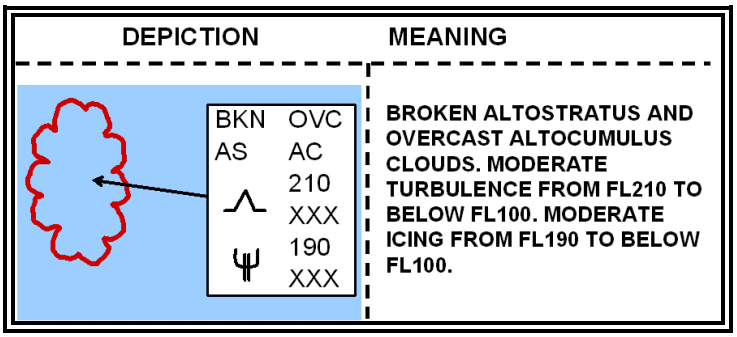


Figure 8-24. Mid-Level SIGWX Chart Icing Examples

8.3.1.6 Moderate or Severe Turbulence (in cloud or in clear air)

Forecast areas of moderate or severe turbulence associated with wind shear zones and/or mountain waves are enclosed by bold yellow dashed lines (Figure 8-25). Intensities are identified by standard symbols (Appendix J).

The vertical extent of a turbulence layer is specified by top and base heights, separated by a horizontal line. A turbulence base which extends below the layer of the chart is identified with **XXX**.

Thunderstorm turbulence is not identified.

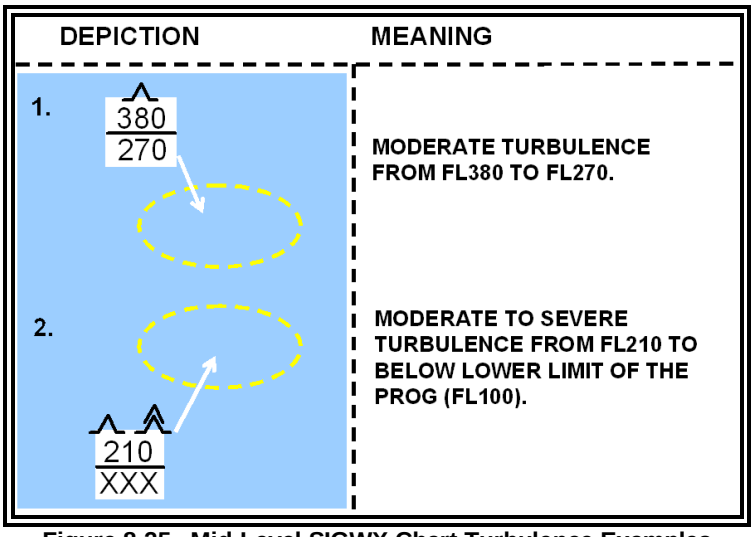


Figure 8-25. Mid-Level SIGWX Chart Turbulence Examples

Areas of moderate or severe turbulence are also depicted by enclosed (red) scalloped lines (Figure 8-24). The identification and characterization of each area appears within or adjacent to the outlined area. If the identification and characterization is adjacent to an outlined area, an arrow points to the associated area.

Standard turbulence symbols are used (Appendix J). The vertical extent of the turbulence layer is specified by top and base heights. Bases which extend below the layer of the chart are identified with **XXX**.

8.3.1.7 Cloud Coverage (non-cumulonimbus)

Clouds are enclosed within (red) scalloped lines (Figure 8-26). Cloud coverage (non-cumulonimbus) appears within or adjacent to the outlined area. If the cloud coverage is adjacent to an outlined area, an arrow points to the appropriate area.

The cloud coverage symbols are listed in Table 8-4. See Table 8-3 for cumulonimbus cloud coverage.

Table 8-4. Mid-Level SIGWX Chart Cloud Coverage (Non-cumulonimbus)

CODED	MEANING	COVERAGE
SKC	Sky Clear	$0/8^{ths}$
FEW	Few clouds	$1/8^{th}$ to $2/8^{ths}$
SCT	Scattered	$3/8^{ths}$ to $4/8^{ths}$
BKN	Broken	$5/8^{ths}$ to $7/8^{ths}$
OVC	Overcast	$8/8^{ths}$

8.3.1.8 Cloud Type

Table 8-5 shows the contractions used to identify cloud type.

Table 8-5. Mid-Level SIGWX Chart Cloud Types

CODED	MEANING
CI	Cirrus
CC	Cirrocumulus
CS	Cirrostratus
AC	Altocumulus
AS	Altostratus
NS	Nimbostratus
SC	Stratocumulus
ST	Stratus
CU	Cumulus
CB	Cumulonimbus

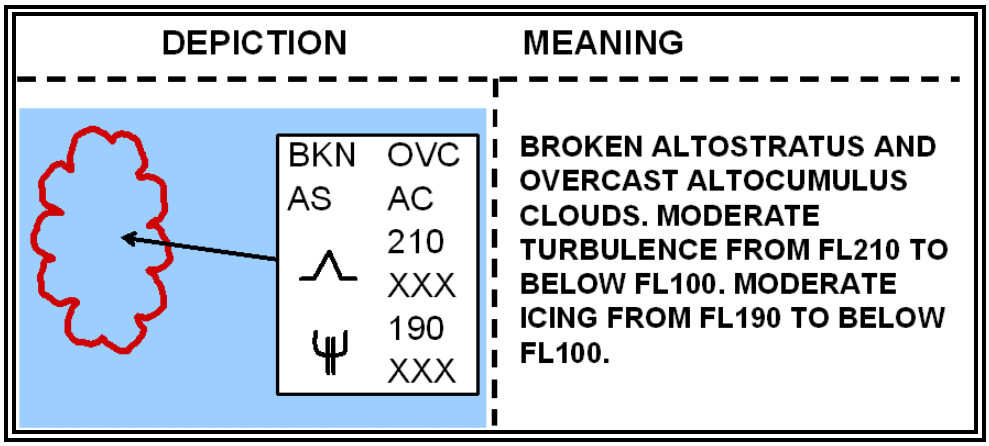


Figure 8-26. Mid-Level SIGWX Chart - Example of Moderate or Severe Icing, Moderate or Severe Turbulence (in cloud or in clear air), Clouds, and Cloud Types

8.3.1.9 Volcanic Eruptions

Volcanic eruption sites are identified by a trapezoidal symbol (Figure 8-27). The dot on the base of the trapezoid identifies the location of the volcano. The name of the volcano, as well as the latitude and longitude are noted adjacent to the symbol.

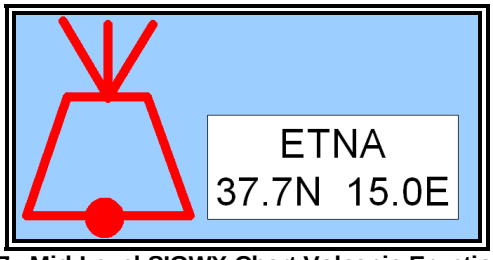


Figure 8-27. Mid-Level SIGWX Chart Volcanic Eruption Example

8.3.1.10 Release of Radioactive Materials

Radioactive materials in the atmosphere are depicted by the standard symbol shown in Figure 8-28. Information on the chart regarding the radioactive material includes the latitude/longitude of the accident site, the date and time of the accident, and a reference to check NOTAMs for further information.

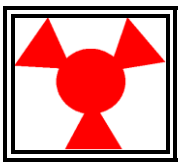
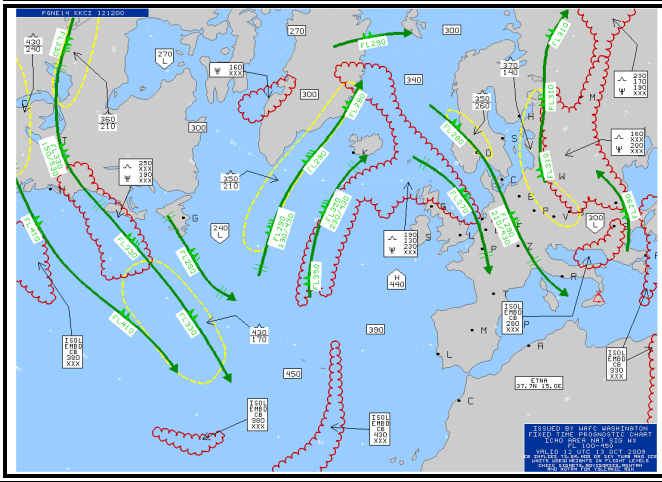


Figure 8-28. Mid-Level SIGWX Chart Release of Radioactive Materials Example

8.3.2 Issuance

The Aviation Weather Center (AWC) in Kansas City has the responsibility, as part of the World Area Forecast Center (WAFC), Washington, to provide global weather forecasts of significant weather phenomena. The AWC issues a 24-hour Mid-Level Significant Weather chart, four times daily, for the North Atlantic Ocean Region (NAT) (Table 8-6). The Mid Level Significant (WIGWX) Chart is found online at: http://aviationweather.gov/products/swm/

Table 8-6. Mid-Level SIGWX Chart Issuance Schedule

North Atlantic Ocean Region (NAT)	Valid Times (UTC)			
	Issued 0800	Issued 1400	Issued 2000	Issued 0200
	0000	0600	1200	1800

8.3.3 Use

The Mid-Level Significant Weather (SIGWX) Chart is used to determine an overview of selected flying weather conditions between 10,000 feet MSL and FL450. It can be used by airline dispatchers for flight planning and weather briefings before departure and by flight crew members during flight.

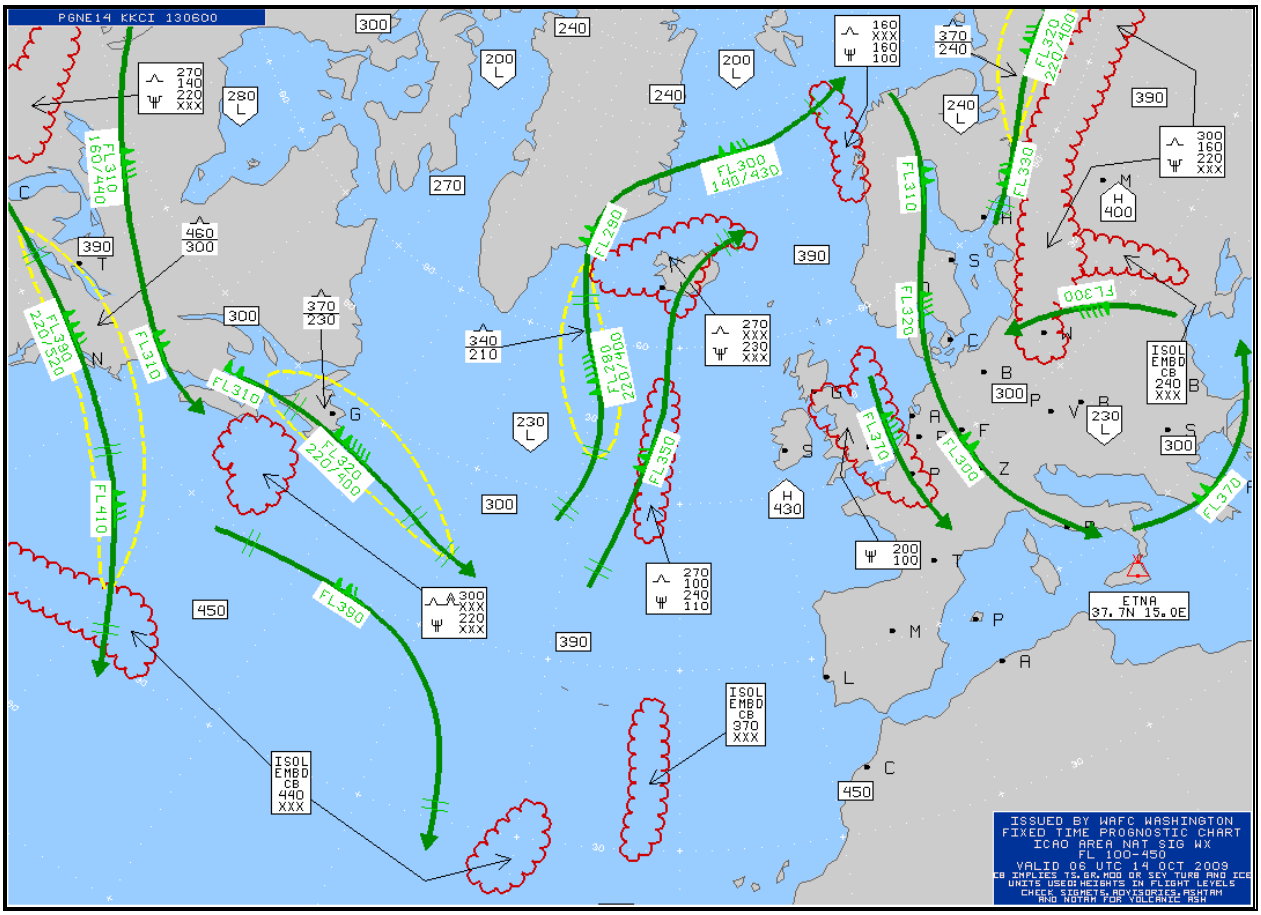


Figure 8-29. Mid-Level SIGWX Chart Example

8.4 High-Level Significant Weather (SIGWX) Charts

High-Level Significant Weather (SIGWX) Charts (Figure 8-30) provide a forecast of significant en route weather phenomena over a range of flight levels from FL250 to FL630, and associated surface weather features. Each chart depicts a "snap-shot" of weather expected at the specified valid time. They are available on the Aviation Weather Center (AWC) web site at: http://aviationweather.gov/products/swh/.

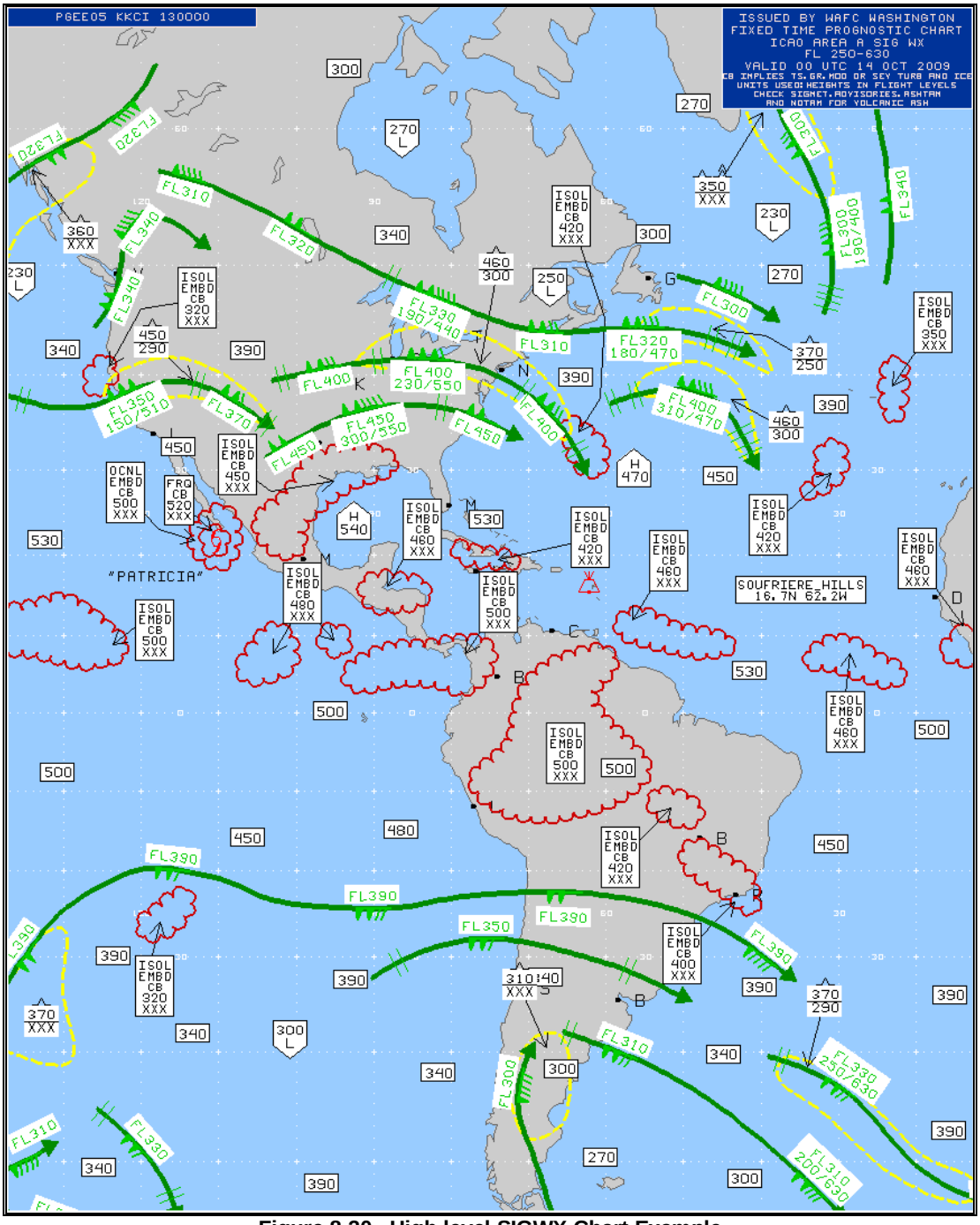


Figure 8-30. High-level SIGWX Chart Example

8.4.1 Content

8.4.1.1 Thunderstorms and Cumulonimbus Clouds

The abbreviation **CB** is only included where it refers to the expected occurrence of an area of widespread cumulonimbus clouds, cumulonimbus along a line with little or no space between individual clouds, cumulonimbus embedded in cloud layers, or cumulonimbus concealed by haze. It does not refer to isolated or scattered cumulonimbus not embedded in cloud layers or concealed by haze.

Each cumulonimbus area is identified with **CB** and characterized by coverage, bases and tops. Coverage (Table 8-3) is identified as isolated (**ISOL**) meaning less than 1/8th, occasional (**OCNL**) meaning 1/8th to 4/8^{ths}, and frequent (**FRQ**) meaning more than 4/8ths coverage. Isolated and occasional CBs are further characterized as embedded (**EMBD**). The chart will not display isolated or scattered cumulonimbus clouds unless they are embedded in clouds, haze, or dust.

The vertical extent of cumulonimbus layer is specified by top and base heights. Bases that extend below FL250 (the lowest altitude limit of the chart) are encoded **XXX**.

Cumulonimbus clouds (CBs) are depicted by an enclosed (red) scalloped lines (Figure 8-31). The identification and characterization of each cumulonimbus area will appear within or adjacent to the outlined area. If the identification and characterization is adjacent to an outlined area, an arrow will point to the associated cumulonimbus area.

On significant weather charts, the inclusion of **CB** or the thunderstorm symbol should be understood to include all weather phenomena normally associated with cumulonimbus or thunderstorm, namely, moderate or severe icing, moderate or severe turbulence, and hail.

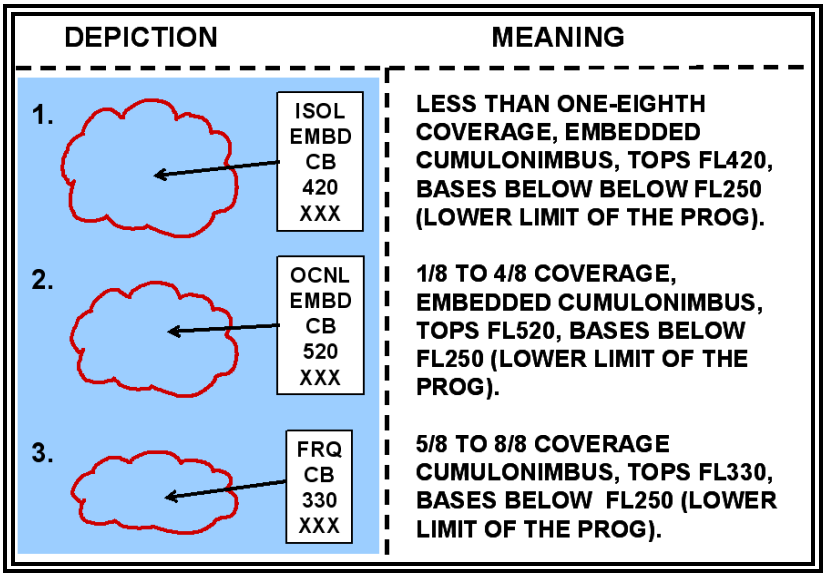


Figure 8-31. High-Level SIGWX Chart Thunderstorm and Cumulonimbus Cloud Examples

8.4.1.2 Moderate or Severe Turbulence

Forecast areas of moderate or severe turbulence (Figure 8-32) associated with wind shear zones and/or mountain waves are enclosed by bold yellow dashed lines. Intensities are identified by standard symbols (Appendix J).

The vertical extent of turbulence layers is specified by top and base heights, separated by a horizontal line. Turbulence bases which extend below the layer of the chart are identified with **XXX**.

Thunderstorm turbulence is not identified.

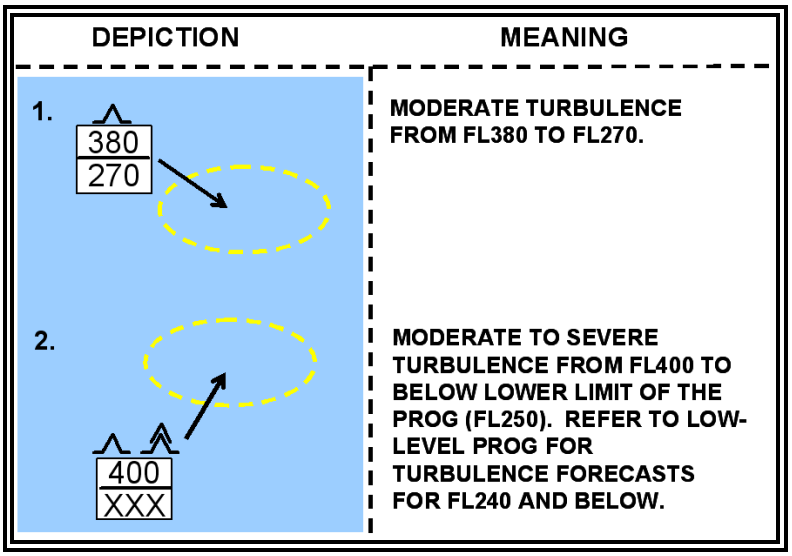


Figure 8-32. High-Level SIGWX Chart Turbulence Examples

8.4.1.3 Moderate or Severe Icing

Moderate and severe icing (outside of thunderstorms) above FL240 is rare and is not generally forecasted on High-Level Significant Weather Prog charts.

8.4.1.4 Jet Streams

A jet stream axis with a wind speed of more than 80 knots is identified by a bold green line. An arrowhead is used to indicate wind direction. Wind change bars (double-hatched, light green lines) positioned along a jet stream axis identifies 20 knot wind speed changes (Figure 8-33).

Symbols and altitudes are used to further characterize a jet stream axis. A standard wind symbol (light green) is placed at each pertinent position to identify wind velocity. The flight level **FL** in hundreds of feet MSL is placed adjacent to each wind symbol to identify the altitude of the jet stream axis.

Jet stream vertical depth (jet depth) forecasts are included when the maximum speed is 120 knots or more. Jet depth is defined as the vertical depths to the 80 knot wind field above and below the jet stream axis using flight levels. Jet depth information is placed at the maximum speed point only, normally at one point on each jet stream. When the jet stream is very long and there are several wind maxima, then each maximum should include forecasts of the vertical depth.

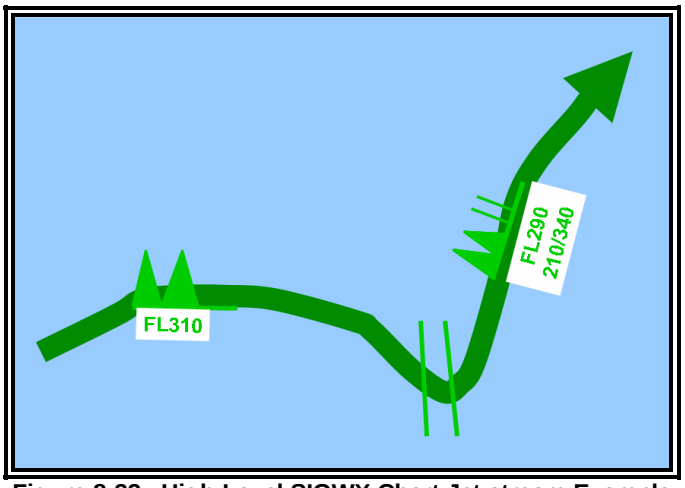


Figure 8-33. High-Level SIGWX Chart Jet stream Example
Forecast maximum speeds of 100 knots at FL310 at one location and 120 knots at FL290 at another location. At the latter location, the base of the 80 knot wind field it FL210, and the top of the 80 knot wind field is FL340.

8.4.1.5 Tropopause Heights

Tropopause heights are plotted at selected locations on the chart. They are enclosed by rectangles and plotted in hundreds of feet MSL (Figure 8-35). Centers of high (**H**) and low (**L**) tropopause heights are enclosed by polygons and plotted in hundreds of feet MSL.

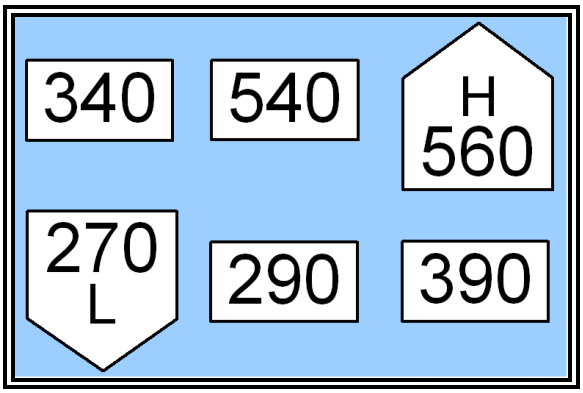


Figure 8-35. High-Level SIGWX Chart Tropopause Height Examples

8.4.1.6 Tropical Cyclones

Tropical cyclones are depicted by the appropriate symbol (Figure 8-36) with the storm's name positioned adjacent to the symbol. Cumulonimbus clouds meeting chart criteria are identified and characterized relative to each storm.

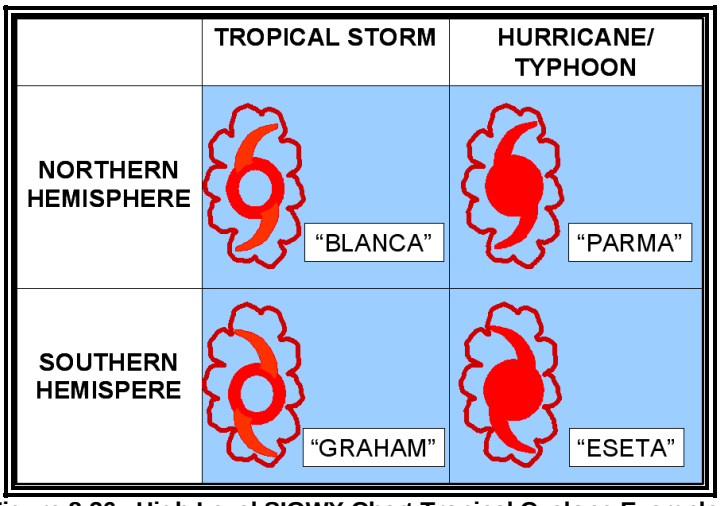


Figure 8-36. High Level SIGWX Chart Tropical Cyclone Examples

8.4.1.7 Severe Squall Lines

Severe squall lines are lines of CBs with 5/8 coverage or greater. They are identified by long dashed (white) lines with each dash separated by a **V** (Figure 8-37).Cumulonimbus clouds meeting chart criteria are identified and characterized with each squall line.

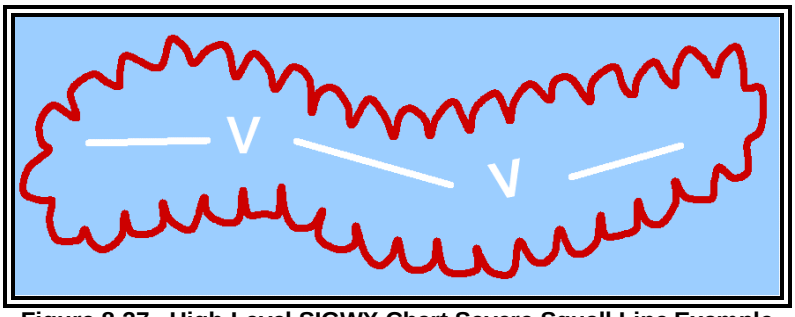


Figure 8-37. High-Level SIGWX Chart Severe Squall Line Example

8.4.1.8 Volcanic Eruption Sites

Volcanic eruption sites are identified by a trapezoidal symbol (Figure 8-38). The dot on the base of the trapezoid identifies the location of the volcano. The name of the volcano, its latitude, and its longitude are noted adjacent to the symbol.

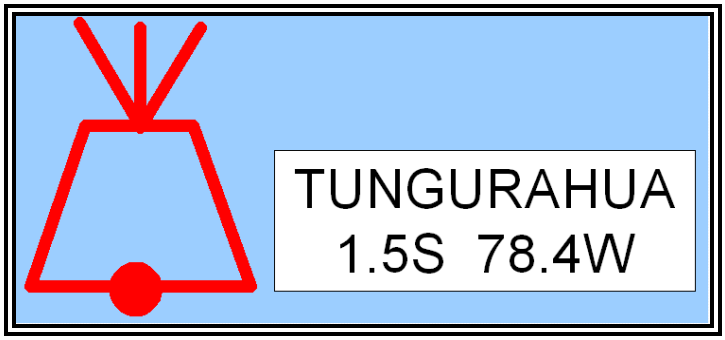


Figure 8-38. High-Level SIGWX Chart Volcanic Eruption Site Example

8.4.1.9 Widespread Sandstorms and Dust storms

Widespread sandstorms and dust storms are labeled with the appropriate symbol (Appendix I). The vertical extent of sand or dust is specified by top and base heights, separated by a horizontal line. Sand or dust which extends below the lower limit of the chart (FL240) is identified with **XXX** (Figure 8-39).

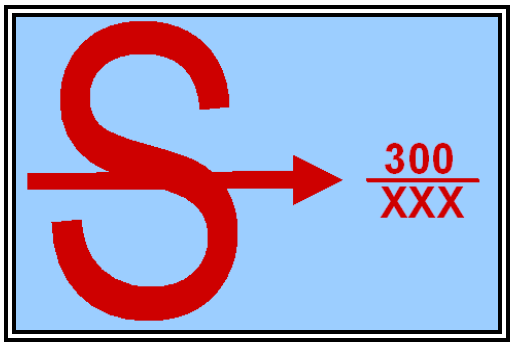


Figure 8-39. High-Level SIGWX Chart Widespread Sandstorm and Dust Storm Example

8.4.2 Issuance

In accordance with the World Meteorological Organization (WMO) and the World Area Forecast System (WAFS) of the International Civil Aviation Organization (ICAO), High-Level significant weather (SIGWX) forecasts are provided for the en-route portion of international flights. The National Weather Service (NWS) Aviation Weather Center (AWC) in Kansas City, MO provides a suite of SIGWX forecast products for the World Area Forecast Center (WAFC) in Washington, D.C. The charts are available for different ICAO areas around the world as defined in Table 8-7. The charts are not amended.

Table 8-7. High-Level SIGWX Chart Issuance Schedule – WAFC Washington

ICAO Area	Chart Type	Chart Area	Valid Times (UTC)			
			Issued 0800	Issued 1400	Issued 2000	Issued 0200
A Americas	Mercator		0000	0600	1200	1800
B1 Americas/ Africa	Mercator		0000	0600	1200	1800
F Pacific	Mercator		0000	0600	1200	1800
H N America/ Europe	Polar Stereographic		0000	0600	1200	1800
I N Pacific	Polar Stereographic		0000	0600	1200	1800
J S Pacific	Polar Stereographic		0000	0600	1200	1800
M Pacific	Mercator		0000	0600	1200	1800

The WAFC in London, England also issues High-Level Significant Weather (SIGWX) Charts for other geographical areas of the world. Both Washington and London WAFC charts are available online at: http://aviationweather.gov/iffdp/sgwx.shtml

8.4.3 Use

High-Level Significant Weather (SIGWX) Charts are provided for the en route portion of international flights. These products are used directly by airline dispatchers for flight planning and weather briefings before departure and by flight crew members during flight.

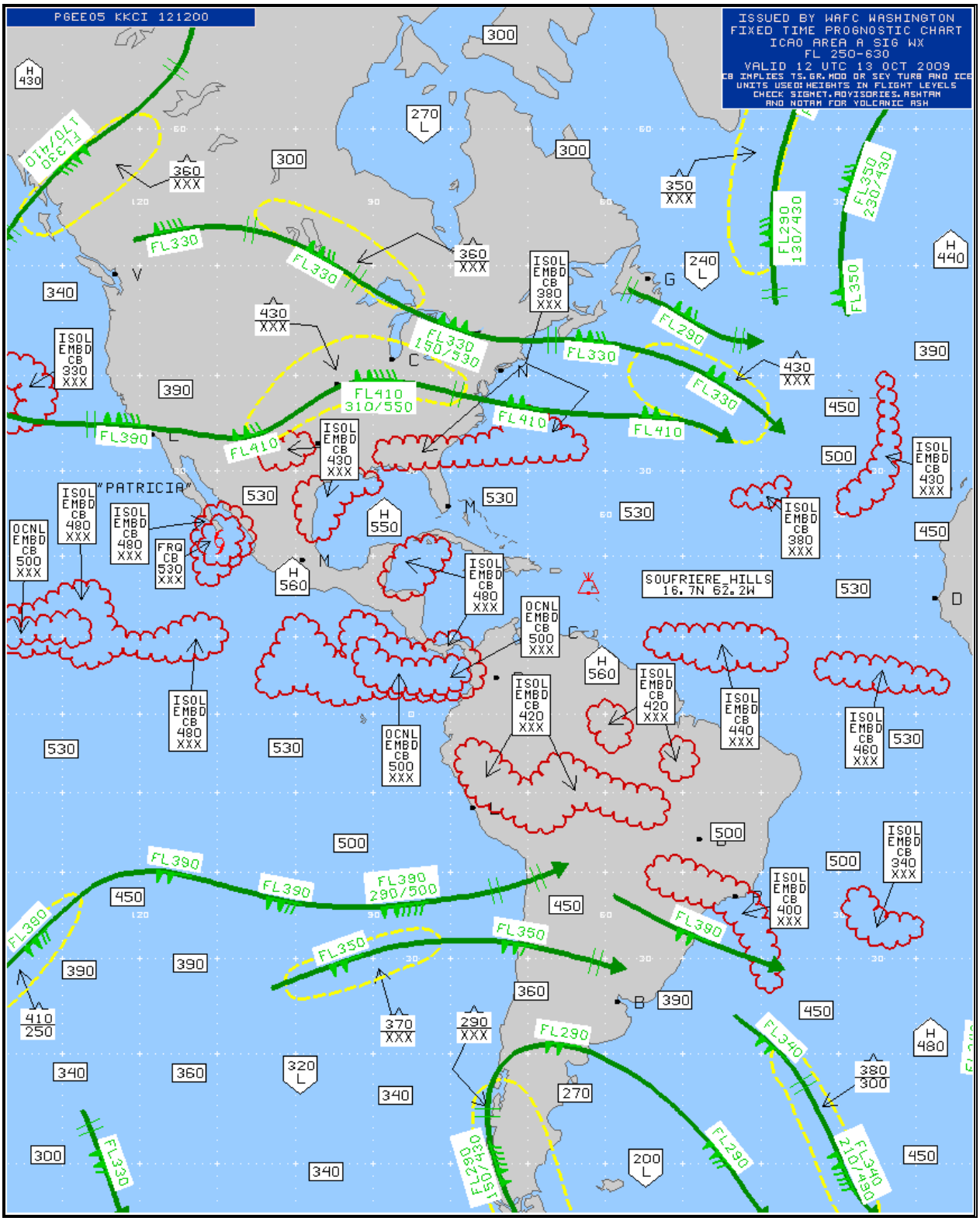


Figure 8-40. High-Level SIGWX Chart - ICAO Area A Example

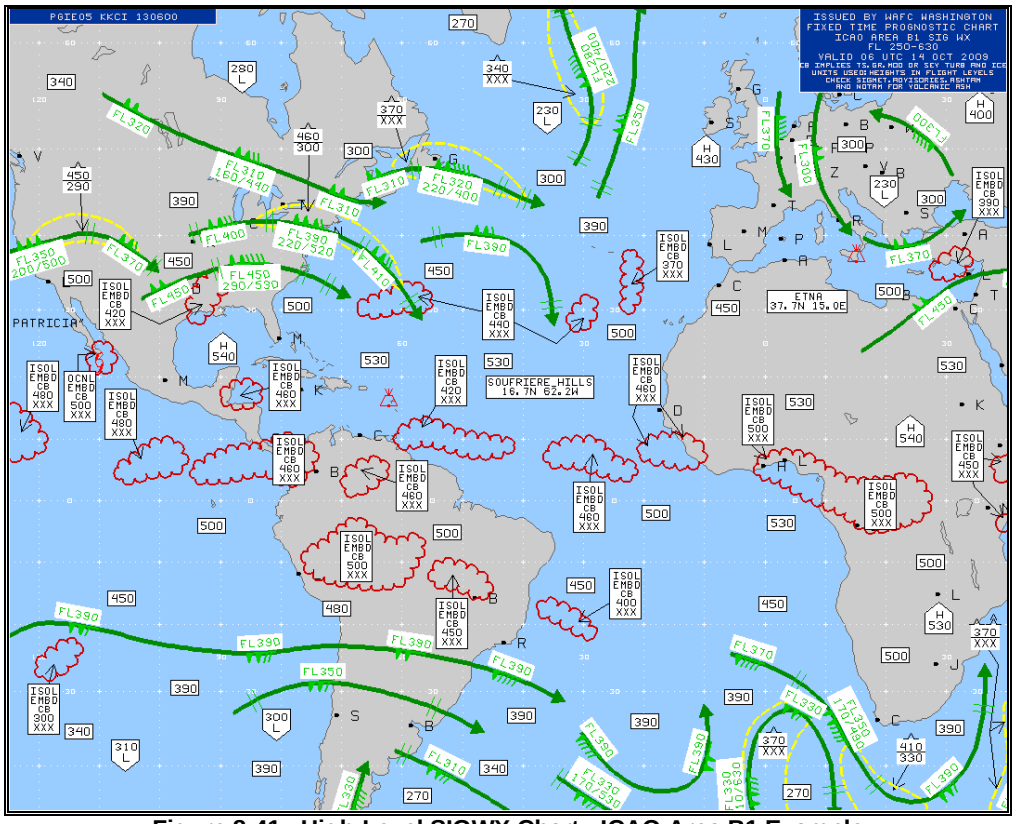


Figure 8-41. High-Level SIGWX Chart - ICAO Area B1 Example

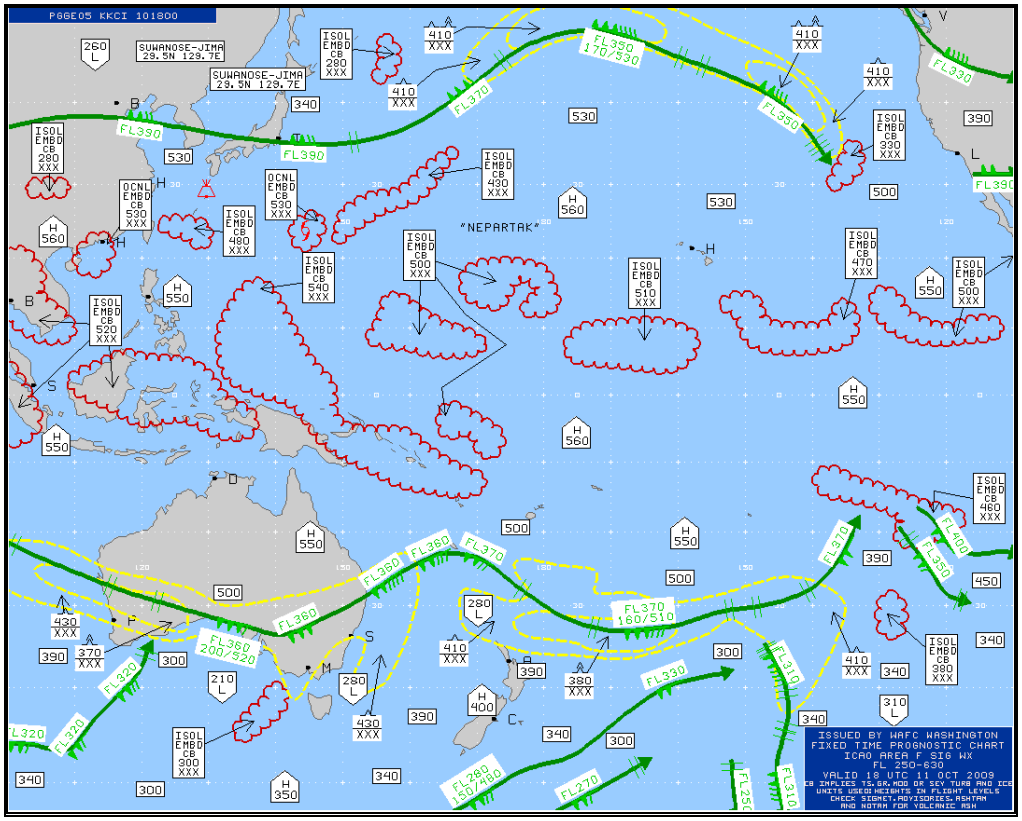


Figure 8-42. High-Level SIGWX Chart - ICAO Area F Example

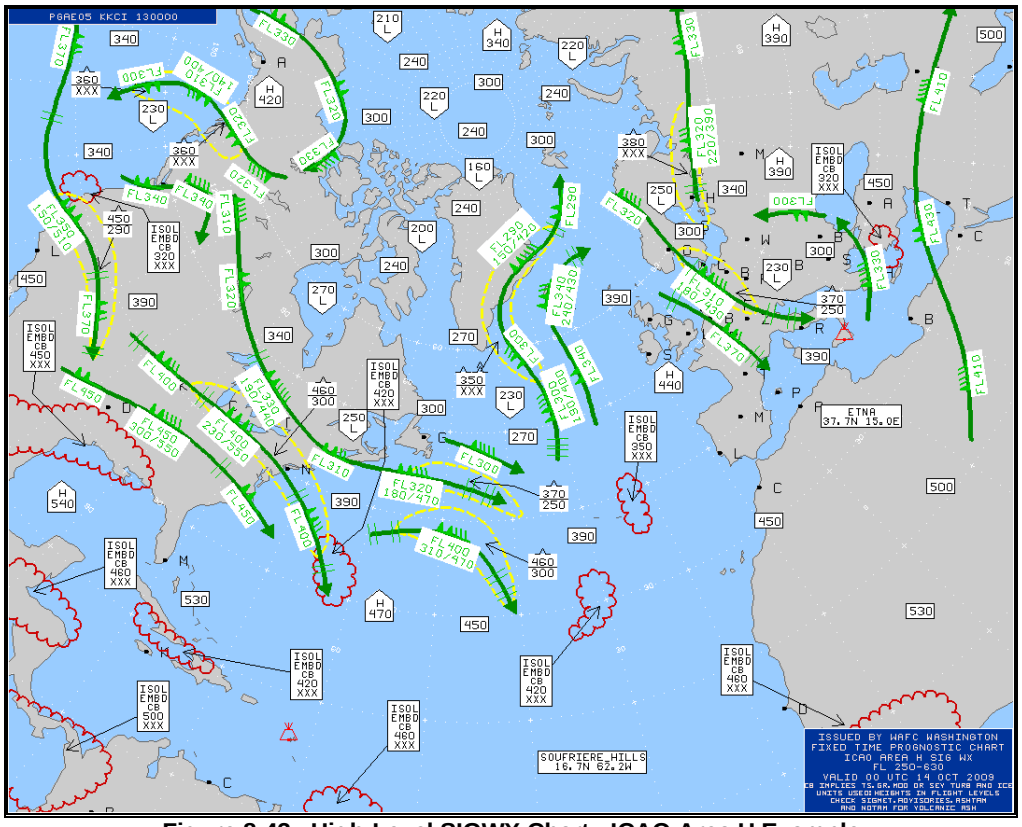


Figure 8-43. High-Level SIGWX Chart - ICAO Area H Example

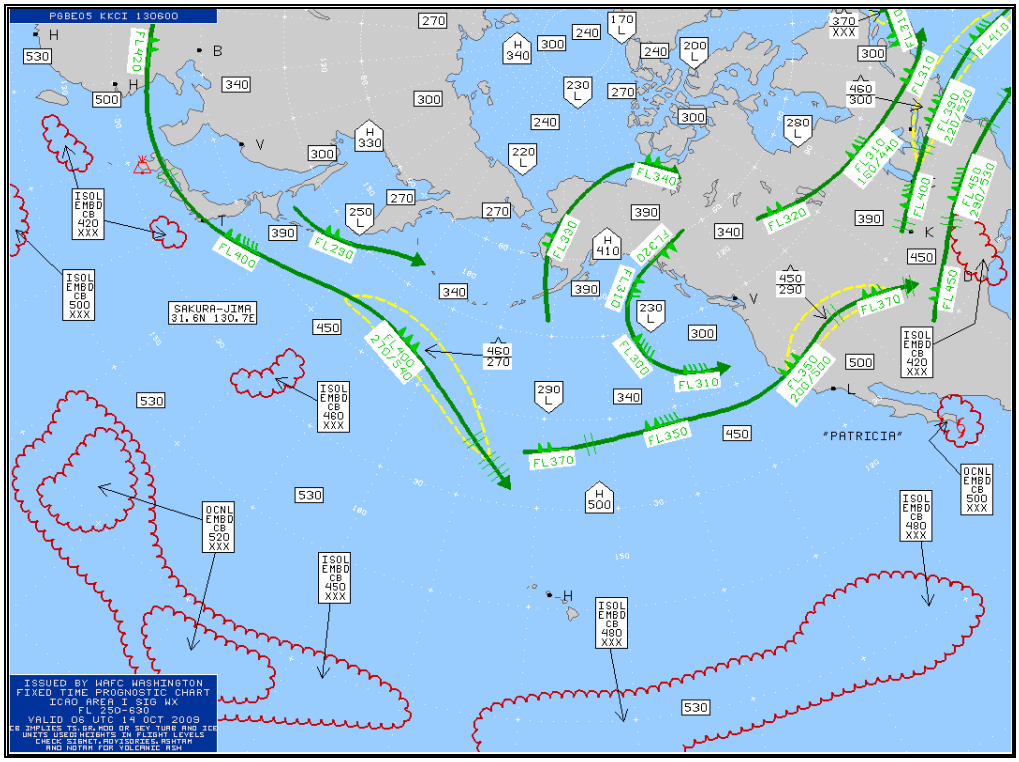


Figure 8-44. High-Level SIGWX Chart - ICAO Area I Example

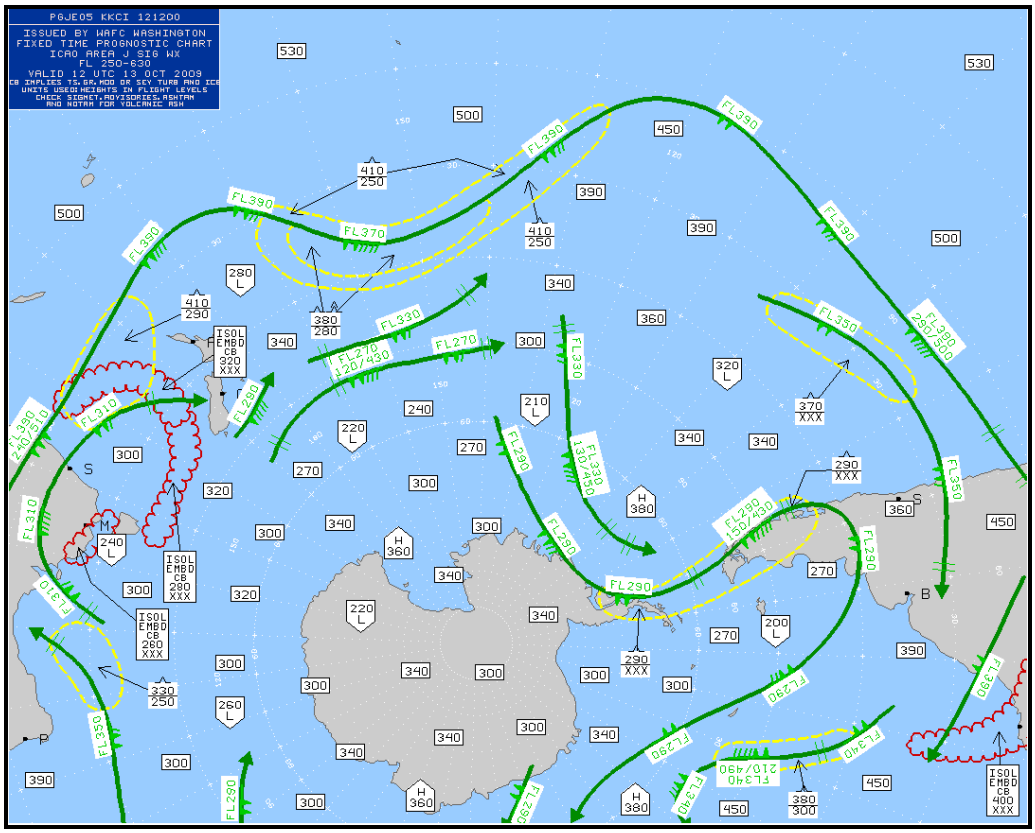


Figure 8-45. High-Level SIGWX Chart - ICAO Area J Example

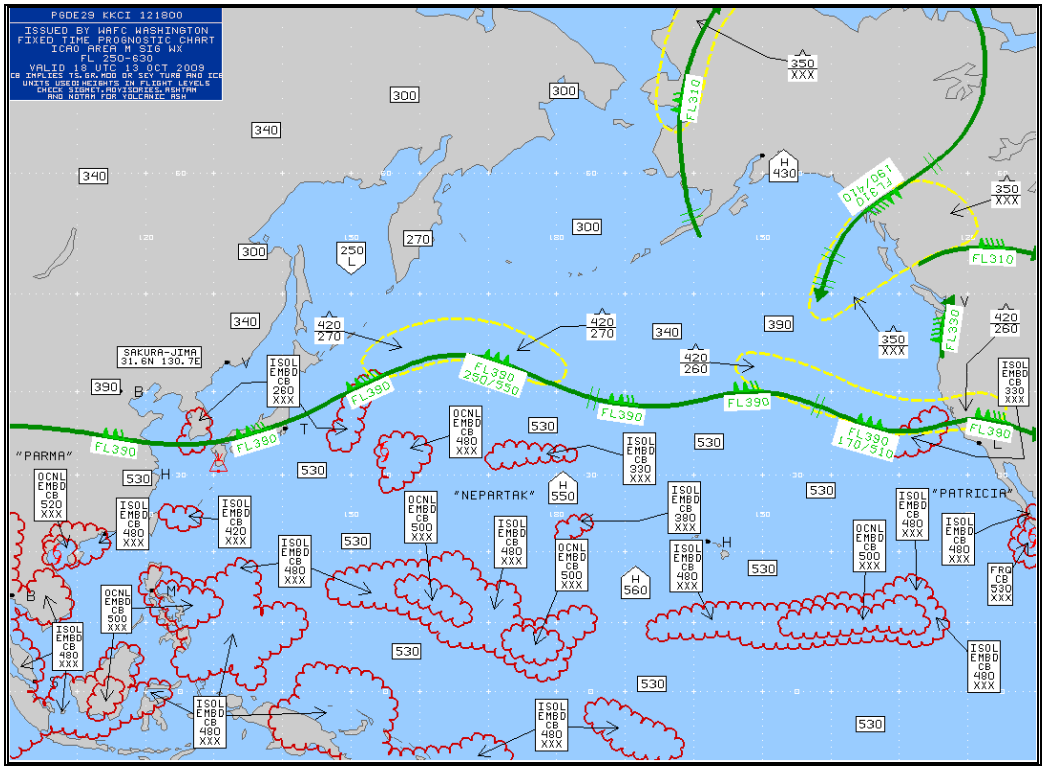


Figure 8-46. High-Level SIGWX Chart - ICAO Area M Example